Report by Tony McAleavy
With an introduction from Tom Bennett

Teaching as a research-engaged profession: problems and possibilities

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Contents

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About the author

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The three reports

There are three reports in this series:

- **Teaching as a research-engaged profession: problems and possibilities**
  by Tony McAleavy (with an introduction by Tom Bennett)

- **The school Research Lead**
  by Tom Bennett (with an introduction by Tony McAleavy)

- **Research Leads: current practice, future prospects**
  by Anna Riggall and Rachel Singer
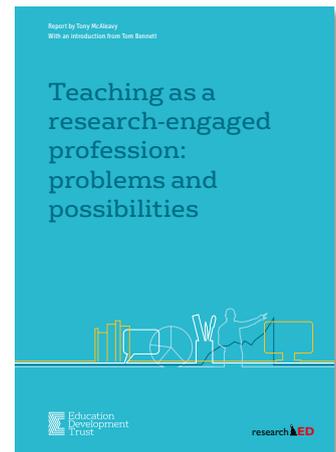
Above: The three reports in this series

Introduction

Increasingly, teachers and schools are becoming aware of the possibilities that becoming research-aware can bring. There is a small but powerful movement within the profession – in the UK and abroad – that has begun to integrate the fruits of research and the skills of the research practitioner into their own practice. But this transition from research consumer to research participant hasn't been without challenges. The quality of some wings of education research can sometimes be suboptimal, or poorly disguised rhetoric, leaving the educator with considerable confusion about which research is valuable and which a waste of time to pursue, or worse. The ecosystem of educational research is often more akin to a jungle than a laboratory, replete with predators in the form of vested interests and those with commercial and political agendas.

Tony McAleavy's report confronts these challenges head on. Better still, he provides an invaluable roadmap for anyone embarking on a journey towards being more research informed, the better to negotiate the difficulties. Many people ask me if it really is necessary for educators to be engaged in any way with research – after all, why should they? The short answer is that the world which we now inhabit is propelled by research, and teachers, however much they may dispute it, are as much a part of this as anyone else. Their assumptions and ideology will be informed by the research of others, even if they aren't aware of it. In such an environment, the only sane response is for the teaching profession to become as immune as possible to poor research, and ask as many intelligent questions as possible from those who would seek to benefit from their ignorance. And to become an articulate, informed and research-literate part of the ecosystem. For the benefit of all.

Tom Bennett
Director and founder of researchED

Research leadership and the case for the research-engaged school

Today many schools are seeking to make professional practice better aligned to research findings and they are reviewing the way that involvement with research is managed. In some schools individual staff members have been designated as Research Leads. This is an exciting moment for them and for everyone else interested in the development of teacher professionalism. It is also a challenging moment because we are in uncharted waters without a compass. There is no blueprint for the work of the Research Lead and the coordination of research activities in schools is not necessarily straightforward.

Research Leads will need to provide colleagues with answers to apparently innocuous but actually explosive questions, such as:

- Should school teaching be seen as a form of evidence-based practice?

- Is there enough good research to guide day-to-day practice in schools?

- Should schools undertake research as well as use evidence created by academic researchers?

Each seemingly innocent question takes us into a realm of dispute and difficulty. The commonsense answer to the first question is 'Yes'. Evidence-based practice sounds like a manifestly good idea. However, several commentators have serious concerns about how far teaching can or should be 'scripted' along lines determined by research and they question the idea of evidence-based teaching.

The second question is less contentious but no less problematic. Most people who have considered the matter conclude that there is insufficient good quality education research to provide practitioners with a comprehensive guide to action, even if that were desirable. So how can Research Leads and other school leaders advocate research-based teaching when the evidence base is often weak and sometimes virtually non-existent?

The third question is divisive. Practitioner research – often known as action research – has a generally poor reputation among university researchers because it is considered to be typically of poor quality and unlikely to generate findings that can be relied upon. Some academics think that teachers should not do their own

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research but should adopt pedagogical approaches that are proven to work as a result of the work of professional researchers. Others advocate not less but better practitioner research using more rigorous research methods.

These are difficult questions for Research Leads and other school leaders. The 'back story' here involves three decades of heated debate about the fundamentals of education research. Without some knowledge of this debate – and the complexities of the issues – the new Research Lead will not be well placed to advise colleagues on the use of research.

Research Leads need to know that they will be operating in an area that is a minefield of controversy. They need to undertake the role with 'eyes wide open'. This warning is not at all a counsel of despair. While there are many contested issues in educational research, there are also good grounds for optimism about the task of better connecting school teaching with the world of education research. So what is to be done? It may be more helpful to aspire to evidence-informed practice rather than evidence-based practice. It is probably both unrealistic and undesirable to think that teaching can be entirely based on findings from academic research. This would marginalise insights from experience, craft knowledge and small-scale practitioner research. It is surely better to strive for evidence-informed professionalism, which values lessons from formal research alongside other guides to action.

The 'research-engaged school' is one manifestation of evidence-informed professionalism. The research engagement tradition has, over a decade, generated many practical insights into the steps that schools can take to create successful professional learning communities. The concept of 'the research-engaged school' and the idea of evidence-informed rather than evidence-based pedagogy offer practical solutions to some of the problems associated with the application of education research.

> It is probably both unrealistic and undesirable to think that teaching can be entirely based on findings from academic research

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Should school teaching be seen as a form of evidence-based practice? The perspective of the proponents

Evidence-based pedagogy seems to be an idea whose time has come. In 2008 the New Zealand academic, John Hattie, attracted massive attention when he published his book, *Visible Learning* in the UK. The *TES* greeted this synthesis of research findings in dramatic terms, describing the book as constituting 'teaching's Holy Grail'.[1] In the years before publication, Hattie had conducted a monumental analysis of what he considered to be the world's most reliable research into interventions likely to improve academic outcomes. Using an innovative methodology, he was able to integrate results from many different studies into an overall judgement of relative effectiveness. Hattie ranked interventions for impact but went much further and provided an overarching commentary on the lessons that teachers should derive from his meta-analysis.

The popularity of Hattie's book is in keeping with the orientation towards evidence based practice that is the spirit of the times. Publication coincided with other important developments in the mediation of research for teachers in the UK. After the 2010 election the government established the Education Endowment Foundation (EEF) for England, with a mission to communicate findings from the best research so that schools could spend their pupil premium money on approaches that were supported by evidence of impact. Guided by Rob Coe from Durham University, the EEF Toolkit, like Hattie's book, calculated the aggregate 'effect size' for a range of school and pedagogical improvement methods based on the meta-analysis of relevant quantitative research.

Around the same time, Ben Goldacre attracted a great deal of publicity when he published a paper for the UK Cabinet Office on the use of Randomised Controlled Trial (RCT) research as a way of determining social policy in several fields, including education.[2] Goldacre followed this up in 2013 with a paper commissioned by the DfE in England describing how a medical research model based on randomised investigations could be applied to education.[3] In publicising

> The popularity of Hattie's book is in keeping with the orientation towards evidence-based practice that is the spirit of the times

[1] Mansell (2008) [2] Haynes et al. (2012) [3] Goldacre (2013)

Goldacre's paper, the DfE talked about how, 'teachers in England have the chance to make teaching a truly evidence-based profession'.[4]

The move towards evidence-based practice is sometimes called the 'what works' approach, on the grounds that research can provide teachers with proven methods that are likely 'to work'. Goldacre is, in effect, an ambassador for the 'what works' approach. The government has established What Works centres in many key policy areas and sees the EEF as the What Works centre for education.

How far should school leaders and teachers embrace 'what works' and aspire to be members of a 'truly evidence-based profession'? There seems to be a degree of political consensus today in the UK about the desirability of the increased use of evidence. However, the community of university-based education researchers is deeply divided about the way in which research should guide practice. This divide goes back decades. Today's orthodoxy, as embodied by the ideas of Hattie and Goldacre, promotes the application in schools of lessons from robust research, although there are many people who disagree with this view.

The evidence movement in education is not monolithic and there are many shades of opinion even within the evidence-based practice camp. While Goldacre seems to celebrate the 'what works' approach, Hattie himself warned against an oversimplistic view of what works in the introduction to *Visible Learning*. There are in fact different schools of thought within the 'what works' movement. One group could be described as the school effectiveness/teacher effectiveness tradition. Another group is the experimental research tradition. These groups do not always agree with each other but both are in turn criticised by a third section of the education research community which believes that the search for 'what works' – the pursuit of what they consider simplistic research-derived solutions – is misguided.

The search for evidence about 'what works' in UK schools goes back many years. In 1979 Michael Rutter, Peter Mortimore and others published their seminal study: *Fifteen thousand hours: Secondary schools and their effects on children.* They analysed the performance of inner London secondary schools in terms of reading literacy and other outcomes. They concluded that schools serving very similar students achieved very different results because some schools were more effective than others. Rutter and his colleagues attempted to identify the school characteristics that led to this differential school effectiveness. School effectiveness research in the UK was born. In the years that followed, a group of academics in the UK and overseas created a substantial body of school effectiveness research: Mortimore, Barber, Reynolds, Sammons, Creemers, Teddlie and Stringfield were just some of the leading school effectiveness researchers who came to prominence in the 1990s. Ministers in both Conservative and Labour governments of the period were impressed and calls were increasingly made to reform those schools which were relatively underperforming in line with approaches used in the relatively high-performing schools as described by the school effectiveness research.

Ofsted was in many ways shaped by the school effectiveness research movement. Researchers in the 1980s had confirmed Rutter's 1979 findings about the power

> There seems to be a degree of political consensus today in the UK about the desirability of the increased use of evidence

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[4] DfE (2013)

of the 'school effect'. They considered that schools serving similar communities could be categorised as relatively high-performing or low-performing. In the best schools there was a substantial positive 'school effect' above and beyond the power of family, class and ethnicity. Ofsted's initial methodology was influenced by a summary of school effectiveness findings that was commissioned from Pam Sammons and colleagues at the Institute of Education.[5] The factors that determined differential performance were identified by the researchers – above all the quality of pedagogy and leadership – and these factors were placed at the heart of the inspection framework that was used for review purposes. Ofsted was tasked with formally categorising the schools and applying improvement pressure on the low-performing schools. The school effectiveness researchers also contributed to the literacy and numeracy strategies that dominated the lives of primary teachers in the years after Tony Blair came to power in 1997. The leading school effectiveness researcher, David Reynolds, jointly wrote an influential study comparing pedagogy in English schools and high-performing Asian countries.[6] Reynolds chaired the government's Numeracy Taskforce for England that helped to shape the new Numeracy Strategy in line with school effectiveness and teacher effectiveness findings. Michael Barber, who had held chairs at Keele University and the Institute of Education before becoming a government adviser, took charge of the new Labour government Standards and Effectiveness Unit for schools in England that drove the Literacy and Numeracy Strategies. By the late 1990s school effectiveness researchers had influence at the heart of government.

School effectiveness research is typically based on statistical analysis of school performance and the statistical attribution of the extent to which schools add value to student outcomes. School effectiveness researchers also often undertake qualitative analysis in order to identify differences between the way effective or ineffective schools and classrooms are organised. As the body of school effectiveness research grew there was increasing emphasis on the analysis of in-school variation, as opposed to school-to-school variation, and the relative effectiveness or ineffectiveness of individual teachers. Again the methodology was typically a combination of statistical analysis and qualitative diagnosis. Such research is not usually experimental, in the sense of involving social science experimentation. School effectiveness researchers try to make sense of the world as it is rather than proposing and testing new approaches through experiment.

Calls for a different experimental research model gathered pace in the 1990s both in the UK and the USA. David Hargreaves was one of the early advocates for a new form of research based on the template of medical research. In 1996 Hargreaves, who was then at Cambridge University, published a thought-provoking short paper based on his lecture, *Teaching as a research-based profession: prospects and possibilities*.[7] There are striking similarities between the ideas of Hargreaves and the current ideas of Goldacre and those in education advocating a new professionalism based on RCT research. Hargreaves argued that school teaching in the 1990s did not remotely constitute a 'research-based profession' largely because of the weakness of the available research. Without a secure body of research, there could be no research-based professionalism.

> As the body of school effectiveness research grew there was increasing emphasis on the analysis of in-school variation, as opposed to school-to-school variation, and the relative effectiveness or ineffectiveness of individual teachers

[5] Sammons et al. (1995) [6] Reynolds & Farrell (1996) [7] Hargreaves (1996)

For Hargreaves the focus of most current education research was flawed. Unlike medical research, education researchers did not typically do the kind of quantitative experimental research that could be replicated along the lines of classical experimental science. Hargreaves said:

> In medicine, as in the natural sciences, research has a broadly cumulative character. Research projects seek explicitly to build on earlier research – by confirming or falsifying it, by extending or refining it, by replacing it with better evidence or theory, and so on. Much educational research is, by contrast, non-cumulative, in part because few researchers seek to create a body of knowledge which is then tested, extended or replaced in some systematic way. A few small-scale investigations of an issue which are never followed up inevitably produce inconclusive and contestable findings of little practical relevance. Replications, which are more necessary in the social than the natural sciences because of the importance of contextual and cultural variations, are astonishingly rare.[8]

Hargreaves was not a lone voice. Two official reports from this period criticised the quality of education research in the UK.[9] Other academics, such as Carol Fitz-Gibbon at Durham University also called for a new kind of education research that created knowledge using quantitative research methods and an emphasis on replication. Together with her colleagues, Peter Tymms and Rob Coe, Fitz-Gibbon published an important paper in 2000, *Promoting evidence-based education: the role of practitioners*. Fitz-Gibbon and her colleagues advocated scientifically robust research, including both qualitative and quantitative research, but with a view that cumulative randomised investigation would generate the most secure evidence:

> The 'gold standard' of evidence in this context is taken to be multiple replications of small scale, randomised controlled trials of feasible interventions in real-life settings.[10]

The Durham group has continued to advocate the use of experimental evidence consistently for the last two decades.

At the same time as Hargreaves and Fitz-Gibbon were calling for robust quantitative research, some academics in the USA were reaching very similar conclusions. The psychologist Bob Slavin at Johns Hopkins University, Baltimore was on a mission in the 1990s to mediate and translate promising research findings for busy policymakers and practitioners. Slavin wanted school districts and schools to spend their money on evidence-based approaches and schemes. In 1998 he co-authored *Show me the evidence!* in which he reviewed the evidence of effectiveness for interventions in such areas as whole school improvement, pedagogical improvement and drop-out prevention. Slavin established the online *Best Evidence Encyclopedia* at Johns Hopkins.[11] This provided – and still provides – a thorough review of the evidence base for different interventions, particularly in the area of whole school improvement and core subject pedagogy, with interventions graded for effectiveness based on rigorous research. Long before John Hattie, Slavin pioneered the idea of meta-studies that assessed educational research and provided headline summaries of the effect findings from studies that

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Unlike medical research, education researchers did not typically do the kind of quantitative experimental research that could be replicated along the lines of classical experimental science

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[8] Hargreaves (1996, p.2) [9] Hillage et al. (1998); Tooley & Darby (1998) [10] Coe et al. (2000) [11] http://www.bestevidence.org/

passed a test of methodological quality. Books such as *Show me the evidence!* and the *Best Practice Encyclopedia* were in effect prototypes for the current EEF interventions toolkit.

Building on the ideas of Slavin, the federal government in America established the What Works Clearinghouse for education in 2002.[12] It continues today and provides a searchable database of research into the effectiveness of different interventions. By 2015 10,500 studies were available via the database.

The ideas of scholars such as Hargreaves, Fitz-Gibbon and Slavin have shaped much thinking about education policy in the UK since the turn of the century. From 2000 the government supported the development of the EPPI-Centre at the Institute of Education in London[13] that specialised in 'systematic reviews' of evidence, in an attempt to distil findings from robust quantitative research in line with the ideas of Hargreaves. In 2007 Slavin and key colleagues from Baltimore established the Institute for Effective Education (IEE) at the University of York,[14] under the chairmanship of the former education minister, Estelle Morris. IEE has since then been very energetic in the business of synthesising and communicating findings from academic research for practitioners along the lines that Slavin had previously established in Baltimore. The Durham group, particularly Rob Coe and Steve Higgins, remain influential and were closely associated with the establishment of the Education Endowment Fund in 2011 and the publication of *The Sutton Trust-EEF Teaching and Learning Toolkit*.[15] The Toolkit considered different interventions and summarised impact on attainment, the strength of the evidence and their cost. It represented an important achievement for those advocating school practice grounded in evidence.

> The ideas of scholars such as Hargreaves, Fitz-Gibbon and Slavin have shaped much thinking about education policy in the UK since the turn of the century

[12] http://ies.ed.gov/ncee/wwc/ [13] http://eppi.ioe.ac.uk/cms/ [14] http://www.york.ac.uk/iee/ [15] https://educationendowmentfoundation.org.uk/toolkit/

Should school teaching be seen as a form of evidence-based practice? The view of the sceptics

Those responsible for research in schools need to understand about the views of proponents of evidence-based teaching. They also need to know that many other commentators believe that the evidence-based practice enterprise is at best simplistic and at worst profoundly misguided. For thirty years this approach has been consistently and continuously attacked and rejected by other leading figures from the field of education research.

Teachers might perhaps imagine that school effectiveness research was relatively uncontroversial, but this is not at all the case. Many researchers consider that school effectiveness research is essentially flawed. The criticisms have been extensive. One leading early critic was Harvey Goldstein at the Institute of Education. In 2000 he expressed his deep unhappiness with school effectiveness research in an article written with Geoffrey Woodhouse.[16] Goldstein itemised the deficiencies of this form of research and identified the weaknesses as:

- Political bias and a subservient relationship with politicians

- Oversimplification of complex causalities

- A weak theoretical basis

- Frequently poor quality research.

Goldstein did not 'pull his punches' and he mentioned by name, unfavourably, many of the leading figures in the school effectiveness movement. Similar criticisms of the school effectiveness approach have continued ever since. Stephen Gorard of Durham University (and previously Birmingham University) has argued that much school effectiveness research in England is misleading and of very limited value because it is based on flawed statistical assumptions about 'value added' performance data. The title of his 2010 article on the subject made clear his position: *Serious doubts about school effectiveness*. Gorard stated that the flawed school effectiveness methodology led to indefensible categorisation of schools as being differentially more or less effective. Other leading academics, such as Robin Alexander at Cambridge University, take exception with the school effectiveness tradition on different grounds. Alexander considers that the 'effectiveness'

> Teachers might perhaps imagine that school effectiveness research was relatively uncontroversial, but this is not at all the case

[16] Goldstein and Woodhouse (2000)

researchers are mistaken because they seek to isolate 'effective' techniques, while largely ignoring wider questions of culture and values. Alexander thinks that it is naive to imagine that techniques that work in one school in one country can be easily transferred elsewhere. He has been particularly scathing about attempts by school effectiveness researchers and others to identify school-based factors rather than wider societal factors in order to explain the relatively weak performance of British students in international tests such as PISA and TIMSS.[17]

As we have seen, several commentators consider school effectiveness research to be flawed. The use of findings from medical-style experimental research has also attracted heavy criticism over many years. The views of the sceptics can be illustrated with reference to three prominent commentators: Martyn Hammersley of the Open University, Gert Biesta, currently at Brunel University and previously at Exeter University, and Frank Furedi, formerly of the University of Kent.

Hammersley provided a careful critique of the David Hargreaves medical analogy soon after the publication of the Hargreaves 1996 lecture. He has continued ever since to challenge the case for evidence-based practice as a guiding principle for school teaching. In 2001, Hammersley suggested that the advocates of evidence-based teaching were creating a false polarity between good research-based practice and bad craft practice derived from reflections on experience:

> The idea that research can make a major contribution to improving practice stems from the assumption that it is systematic and rigorous, and provides explicit evidence which can be assessed objectively. This is held to contrast with evidence from professional experience, which is portrayed as unsystematic – reflecting the particular cases with which a practitioner has happened to come into contact – and as lacking in rigour – in that it is not built up in an explicit, methodical way.[18]

Hammersley suggested that Hargreaves and his followers underestimated the difficulty of creating useful transferable professional knowledge through educational research. In particular, he accused Hargreaves of failing to acknowledge that reluctance to use supposedly authoritative quantitative research methods was driven by a growing awareness in the 1970s and 1980s that the working of complex human institutions like schools could not be easily reduced to mechanistic or 'positivistic' interpretations, and that social science was very different from natural science.

> As Hargreaves knows… the shift to qualitative method in the 1970s was prompted by powerful criticisms identifying unresolved problems in this 'positivist' research… Human social life is quite different in character from the physical world studied by natural scientists (and, we might add, from that investigated by most medical researchers)… Hargreaves treats these disputes as if they were merely a matter of fashion… At the core of them is precisely the question of the extent to which one can have a science of human behaviour of a kind that models itself, even remotely, on the natural sciences. By failing to mention these problems, Hargreaves implies that the sort of cumulative, well-founded knowledge he wants can be created simply by researchers pulling themselves together and getting back to work (under the direction of teachers). The situation is not so simple; and not so easily remedied.[19]

The use of findings from medical-style experimental research has also attracted heavy criticism over many years

[17] Alexander (2010) [18] Hammersley (2001) [19] Hammersley (2002, p.19)

In 2007 Gert Biesta, then at the University of Exeter, published an article that still constitutes one of the most comprehensive critiques of the evidence-based practice school of thought. Biesta gave his article the striking title: *Why 'what works' won't work*. He rejected the medical analogy as the starting point for the analysis. He suggested that education was fundamentally a more complex business than medicine and that the search for cause and effect was far less straightforward in educational settings compared to therapeutic situations. He said: 'The condition of being a student is quite different from that of being a patient – being a student is not an illness, just as teaching is not a cure'.[20]

For Biesta and other critics, the evidence-based approach encourages a simplistic reductionist analysis. Commentators such as Biesta reject the notion that it is possible to distil complex human interactions into headlines about the likely effects of different interventions.

Biesta also criticised the way that evidence-based practice model potentially deskilled teachers by positioning them as mere technicians, whose only role was to implement faithfully the wisdom derived from the research of others. He linked this point to a criticism of the universality of the claims of the evidence-based practice school. He asked: do we really think that 'proven' interventions will work everywhere, with all students in all situations?

> *There are those who think that research will be able to give us 'the truth', that 'the truth' can be translated into rules for action, and that the only thing practitioners need to do is to follow these rules without any further reflection on or consideration of the concrete situation they are in.*[21]

Biesta discussed the debate within medicine about evidence-based practice and concluded that the discourse within the medical profession was in reality more complex than one might think from the outside. He returned to the idea earlier raised by Hammersley that proponents of evidence-based education were guilty of simplistic binary thinking: putting research findings on a pedestal while dismissing understanding derived from insight, judgement and experience. Biesta pointed out that within the medical profession there was a recognition that it was not enough to look to the research evidence for a comprehensive clinical 'script'. He said that the best medical practitioners self-confidently combined their own insights from experience with evidence-based findings and in the process escaped from a potential 'tyranny' of evidence:

> *Good doctors use both individual clinical expertise and the best available evidence, and neither alone is enough. Without clinical expertise, practice risks becoming tyrannised by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient.*[22]

Biesta considered the research of others to be insufficient as a source of professional knowledge and a guide to action. Used simplistically, deference to research would encourage 'cookbook' approaches to teaching. Instead, using ideas from the philosopher, Dewey, Biesta made the case for reflective practice and personal experimentation as the key guide to professional action. In doing so he rejected the concept of evidence-based research which he portrayed as a potentially unthinking adherence to an impoverished script derived from the

For Biesta and other critics, the evidence-based approach encourages a simplistic reductionist analysis

[20] Biesta (2007) [21] Biesta (2007, p.11) [22] Sackett et al. (1996, cited in Biesta, 2007)

research of others conducted in other contexts. Teachers should pay attention to research if and when it exists but should not be intimidated by it.

> [...] 'Evidence' – if such a thing exists – does not provide us with rules for action but only with hypotheses for intelligent problem solving.[23]

Hammersley has continued to voice disquiet about what he considers to be simplistic conceptions of how research can be applied in school education. The title of his 2013 book sums up his position succinctly: *The Myth of Research-Based Policy and Practice.*

Frank Furedi, formerly professor of sociology at the University of Kent and an outspoken critic of an over-reliance on evidence-based education, has been damning of the 'what works culture', claiming that it leads to 'processed education' which is 'dominated by an instrumentalism that threatens to reduce education to a technique and teaching to a technical intervention'.[24] Furedi makes the point that by adopting a position whereby techniques or interventions can be deemed to 'work' one assumes that pedagogy results in predictable outcomes for generalisable groups.[25]

The unique nature of both children and contexts, and an inability to produce a one-size-fits-all intervention for heterogeneous groups, constitute for him key arguments against an evidence-based approach – what works in one context or with one group of children, may not work in/with another. Furedi asserts that 'so-called best practice cannot simply be reproduced in different environments'. His view is that just because one teacher has a style that works for them, it does not mean another teacher's different style will not be equally as effective.

In comments that echo Hammersley and Biesta, Furedi also criticises the links that those who support an evidence-based approach make between education and medicine: 'The pro-RCT lobby's drawing of an analogy between schooling and medical research is unhelpful, not least because it implies some kind of equivalence between a child and a patient'.[26]

Not only do academics disagree about the way university research can be used as a guide to school practice, they also disagree about the value of teachers undertaking research of their own. A number of commentators have suggested that while it is important for schools and teachers to read and be aware of academic research, it would be a mistake for them to carry out research themselves. John Hattie told the *TES* that researching 'is a particular skill' which takes years to master: 'Asking teachers to be researchers? They are not.' He suggested that there was no evidence action researchers make a difference to the quality of teaching. Hattie has said: 'I want to put the emphasis on teachers as evaluators of their impact. Be skilled at that. Whereas the whole research side, leave that to the academics.'[27]

> Not only do academics disagree about the way university research can be used as a guide to school practice, they also disagree about the value of teachers undertaking research of their own

[23] Biesta (2007, p.17) [24] Furedi (2013a) [25] Furedi (2013b) [26] Furedi (2013c) [27] Stewart (2015)

Is there enough good research to guide day-to-day practice in schools?

This is a less controversial but no less important question for anyone coordinating or managing research in schools. The answer to the question is not good news. Published educational research simply does not provide comprehensive answers to many of the issues that teachers face on a daily basis.

In looking to research as a guide to action there is a problem of coverage and content. Huge swathes of specific school teaching activity have never been subject to rigorous extensive research. Effective pedagogy, for example, in non-core subjects has attracted little research attention from either teacher effectiveness or experimental researchers. So it is simply not possible for a secondary history teacher or music teacher, for example, to consult the research base in order to obtain detailed research-based guidance on subject-specific pedagogy. This subject-related research – conducted to a high methodological standard – barely exists.

The problem of content is related to the level of investment in education research. To say that education research is a 'Cinderella area' compared to other policy fields is an understatement. This was recently highlighted in an interesting commentary by a medical researcher at Bristol University, Neil Davies.[28] He pointed out that in terms of proportion of budget, the Department of Health in 2012 spent 33 times as much on research as the Department for Education. The situation then got much worse! The Department for Education budget for research has been slashed since 2012. The spending of the EEF helps but overall there has been a sharp decline in government spending on education research.

The fundamental point that Davies makes is that education research is funded at a pitiful level compared to health research, so we should not be surprised if much of the research that we need in education just does not exist.

In looking to research as a guide to action there is a further problem of method and transferability. Is education research typically carried out in a way that generates findings that can guide action in other contexts? The answer is 'No'. It is still the case worldwide that the bulk of education research does not come in

> Published educational research simply does not provide comprehensive answers to many of the issues that teachers face on a daily basis

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[28] Davies (2015)

the form of studies that generate potentially transferable findings. Much of the small scale or qualitative research undertaken may be of a good quality but it is very difficult to generalise from these types of educational research. Those leading research in schools will have to work hard to find evidence relevant and useful in their contexts and will need to exercise skill in judging the quality of the research that does exist.

The systematic reviews of the Institute of Education EPPI-Centre illustrate the transferability problem graphically. Specialists at EPPI-Centre and others have developed a method for assessing research studies in terms of the likely transferability of findings. This is called systematic review. Over and over again EPPI systematic reviews have revealed that most research studies in any given field are simply not of a type that makes possible confident judgements about the transferability of the findings.

In recent years – doubtless due to funding problems – EPPI have undertaken few systematic reviews of issues of interest to school teachers in England. Going back to 2008 EPPI did undertake a systematic review of interventions aimed at improving the educational achievement of pupils identified as gifted and talented.[29] This illustrated very powerfully the weakness of the evidence base as a guide to action. Through a bibliographical search EPPI identified about 21,000 potentially relevant research studies into approaches to giftedness worldwide. Almost all these studies, on closer examination, failed to pass the systematic review test for the potential transferability of the findings. In the end the findings about recommended evidence-based practice with respect to provision for gifted students were based on an in-depth synthesis of findings from just 15 studies from the initial trawl of 21,000 studies.

> Those leading research in schools will have to work hard to find evidence relevant and useful in their contexts and will need to exercise skill in judging the quality of the research that does exist

[29] Bailey et al. (2008)

Lessons from the evidence-engaged school

As we have seen, schools wishing to adopt evidence-based approaches face a couple of major challenges. The experts disagree about how far teaching should be determined by findings from external research evidence and at the same time there seems to be only a limited amount of evidence that can be used as a reliable guide to action.

Dylan Wiliam highlighted many of these challenges in an article in the *TES* in 2015. He emphasised that research is rarely an unequivocal guide to action. While welcoming much of the recent work on the synthesis of research findings, Wiliam attacked the naivety of some 'what works' proponents who believe that research can generate techniques, proven to work universally:

> *Politicians and educators want to find 'what works'. But the simple truth is that, in education, everything works somewhere and nothing works everywhere.*[30]

These are big issues and may seem like a road-block for research leadership. It is perhaps useful to look at the way other professions have responded to the same dilemma of how to use evidence if research-derived evidence fails to provide an unambiguous, comprehensive script. Much has been made of the medical analogy, and the case for teaching to become an evidence-based profession along the lines of medicine. It may be that we are too preoccupied with medicine as a model and should look more widely at the way other professions engage with research. Social workers, for example, constitute another interesting comparator. So how do children's social workers see the question of research? In fact there has been a debate over many years about social care and evidence that is relevant to the school debate about evidence.

During the period 2000–2006 social workers were under pressure, just like teachers, to develop their professionalism along evidence-based lines. This was a serious matter. After the death of Victoria Climbié in 2000, social workers were challenged to justify their methods and a move to evidence-based practice was proposed as a way of improving the quality of social work professionalism. However, the social care profession pushed back and argued for a more nuanced approach. The consensus that emerged was that social care must be evidence-informed rather than evidence-based. This consensus can be seen from a guidance

> It is perhaps useful to look at the way other professions have responded to the same dilemma of how to use evidence if research-derived evidence fails to provide an unambiguous, comprehensive script

[30] Wiliam (2015)

document published in 2006 after years of debate about social care as an evidence-based profession.

> *The nature of research in social care is that it is often more about increasing background understanding, giving insights into the nature of problems, changing attitudes and beliefs, and generating ideas, rather than prescribing action... Research findings cannot just simply be taken at face value and applied to any situation. Messages must be assessed for their relevance and transferability to the local context and circumstances... Practitioners are not passive recipients of research. They have to make sense of research by reconstructing or synthesising it with other sources of knowledge (such as professional experience and the views of service users) ... The evidence informed practitioner carefully considers what research evidence tells them in the context of a particular child, family or service, and then weighs this up alongside knowledge drawn from professional experience and the views of service users to inform decisions about the way forward.*[31]

It would be easy to re-write this advice substituting teaching for social care but maintaining all the core messages. Just as with social workers, teachers have a duty to use the research-derived evidence but it will not give a precise script for every situation, so teachers also have to use experience-based judgement. Teachers and school leaders, like social workers, cannot be seen simply as technicians who must passively accept and act upon directives from academic researchers. Teachers are professionals who must adapt research-derived guidance to meet the particular circumstances they face, using judgement and lessons from experience. In addition to research findings, other sources of evidence such as student and parent voice must be taken into account. This is much more realistic than a narrow conception of evidence-based teaching; it is also much more exciting. What is being proposed is a rich, multi-faceted evidence-informed professionalism.

At exactly the same time that social workers were establishing the need for evidence-informed social care, some pioneering individuals and organisations were reaching similar conclusions in the context of school education. They developed the concept of the *research-engaged school*, which is in turn a manifestation of the concept of *evidence-informed practice* rather than *evidence-based practice*. As Dylan Wiliam rightly pointed out in his 2015 article, the idea of entirely evidence-based practice is an impossible aspiration.[32] However, evidence-informed practice is a perfectly realistic goal. The research-engaged school approach is an attempt to show what realistic, evidence-informed practice might look like in the context of a school. Research engagement is inclusive and can accommodate different research perspectives and different approaches to evidence-based practice and, crucially, it recognises the value of insights that are not derived from formal research. The research-engaged school uses formal research findings but also much more informal modes of enquiry and reflection. The research-engaged school uses the best available external evidence while also seeking to build the school as a single professional learning community. It understands the importance of personal insights derived from experience and good analysis of other forms of management information such as test results and feedback from students and parents.

> Teachers are professionals who must adapt research-derived guidance to meet the particular circumstances they face, using judgement and lessons from experience

[31] *Research in practice* (2006) [32] Wiliam (2015)

The term 'research-engaged school' was first developed by Graham Handscomb at the turn of the century. Handscomb was at the time a senior schools adviser working for Essex County Council. He collaborated with John MacBeath at the University of Cambridge and schools in Essex on an initial research engagement project in 2002–2003. The development of the idea of the research-engaged school from Handscomb and MacBeath onwards has been very helpfully documented by David Godfrey in his 2014 article: *Leadership of schools as research-led organisations in the English educational environment: cultivating a research-engaged school culture*. Godfrey, Handscomb, MacBeath and the other research-engaged school proponents managed to reconcile the views of the advocates and opponents in the evidence debate through their pragmatic and pluralistic approach. Godfrey's own view of the research-engaged school is close to the vision for research-informed social care described above:

> *One understanding of the term 'evidence-based practice' envisages schools as organisations whose practices are largely or entirely dictated by externally generated, top-down knowledge. By contrast, in a research-engaged school, teachers should be free to use professional judgement based on a combination of tacit and explicit knowledge... Thus, judgement, intuition and instinct, gained through experience, as well as research-based data should all be called upon to inform practice. As many have argued, the term 'evidence-based practice' too often suggests an uncritical engagement with supposedly incontrovertible research evidence, based on a prescriptive 'what works' model (e.g. Biesta, 2007). Therefore, in a research-engaged school, the 'evidence base', should be viewed not as a body of finite knowledge to be prescribed and imposed on teachers, but rather as a living process built around practical experience in classrooms, developed from and adapting to particular teaching and learning settings'.*[33]

What did this mean in practice? Handscomb and MacBeath urged schools to use findings from research in an appropriate way but also to use other sources of data and management information when shaping plans for school improvement. They defined the research-engaged school as one where 'Research and enquiry is at the heart of the school, its outlook, systems, and activity'.[34]

Key to this model is the combination of formal research and other types of enquiry. Access to external and internal formal research can be combined with other forms of professional enquiry to create the conditions for organisational growth. This combination of research and less formal reflection has the potential to take schools beyond narrow concepts of evidence-based practice. The work of Handscomb and MacBeath addressed the practicalities of research engagement. They were influenced by Handscomb's interest in powerful professional learning and MacBeath's work on whole school self-evaluation and external school review. For them research engagement was not an end in its own right, nor an individualistic exercise for those keen on research, but part of a wider whole-school approach to improved organisational performance. Research engagement was not an indulgence or the preoccupation of a few enthusiasts but rather a way of approaching 'the key business of the school'.

> The work of Handscomb and MacBeath addressed the practicalities of research engagement

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[33] Godfrey (2014, p.10) [34] Handscomb & MacBeath (2003, p.3)

Handscomb and MacBeath were pragmatists. They connected the research-engaged school to the external agenda of the time, in particular Ofsted requirements for whole school self-evaluation and school improvement plans. They advocated enquiry teams that used internal and external research, and other data sources, to design solutions to real problems confronting schools. They provided schools with self-evaluation tools that promoted research engagement as part of the wider strategy for school improvement.

Caroline Sharp and colleagues at the National Foundation for Educational Research (NFER) took an interest in the work in Essex, and assisted in the further development of the approach outside Essex, working with both primary and secondary schools across several local authority areas in 2003–2005. The NFER book, *Postcards from research engaged schools*, documented this project and provided instructive vignettes showing how school development could be enhanced through research engagement.[35] The NFER team recognised the importance of leadership and produced an interesting guide to the leadership of the research-engaged school that was published in partnership with the National College for School Leadership in 2006. They highlighted both potential organisational gains and the motivational benefits of research engagement: 'Research engagement helps school leaders to develop their schools and make them exciting places to work'.[36]

The NFER team saw the research-engaged school as a professional learning community that interpreted 'research' very broadly for the purpose of school improvement:

> *A research engaged school is one that: investigates key issues in teaching and learning; uses enquiry for staff development; turns data and experience into knowledge; uses evidence for decision making; and promotes learning communities.*[37]

The model advocated by NFER assumed that a school at any one time would be undertaking one or more research projects through designated research teams, and entirely aligned to the school's improvement or development plan. Each project would be framed around a key question, suitably resourced and ideally with access to external research advice:

> *The research question is central to the success of the research project. This will identify what the research project is and what it is not about, guide the methodology and keep the research team focused. Time spent developing a good research question will ensure that it is answerable, practical and specific. An expert research adviser can be particularly helpful in this process.*[38]

NFER saw research engagement as a way of using evidence, research and enquiry as the basis for school improvement. It was a method for understanding the issues and challenges that were preventing the school from achieving optimal performance. It enabled schools to design improvement strategies to address areas that had been previously identified as problematic. In addition it provided ways and means of measuring and monitoring the impact that these solutions had in practice. 'Evidence' included the academic work of external researchers but also

> NFER saw research engagement as a way of using evidence, research and enquiry as the basis for school improvement

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[35] Sharp et al. (2005) [36] Sharp et al. (2006) [37] ibid (p.2) [38] ibid (p.5)

insights from other schools and other non-academic sources of guidance, such as Ofsted. The research-engaged school emphasised the importance of a range of internal sources of data. This included data and information collected by the school for non-research purposes.

Raphael Wilkins at the Institute of Education took the concept of the research-engaged school further in his 2011 book, *Research engagement for school development*. He emphasised the management support needed for research effectiveness. In an interview given at the time of publication, Wilkins gave a useful summary of the management conditions for effective research engagement. School leaders needed, for example, to understand the specifics of how research works. There was also a need for access to external research support and quality assurance.

> *Effective research engagement by schools requires a committed senior leadership team who have well-developed knowledge of research matters; the embedding of research into normal practice so it is not an 'extra'; and appropriately chosen sources of external support for the quality of research undertaken by teachers, and for access to published research findings. Effective research engagement by schools also keeps focused on supporting the school's primary purposes, so it does not become a distraction.*[39]

Wilkins helpfully identified how the nature of research engagement needed to be calibrated against the effectiveness level of the school. For a 'fragile' school, an over-ambitious research programme might be counter-productive. For a school moving 'from good to great' a strong commitment to wide-ranging research could be the key to transformation. Wilkins discussed this idea of differential research engagement in a paper given to the ICSEI conference in 2011. In doing so he illustrated the pluralistic approach to 'evidence' that is possible in the context of the research-engaged school. For schools in distress, the most important 'research' may focus on the urgent analysis of performance data rather than thoughts about the transfer of findings from the conventional research literature:

> *When a school is failing, requiring intervention and 'turnaround', the concerns of leadership are short-term... These conditions are extremely hostile to the fostering of engagement in practitioner research of the conventional kind. The school leadership may, however, be thirsty for certain kinds of data, including quantitative analysis of attainment, reports of lesson observations, and the views of students. There may also be a desire for any suitably robust information indicating a strength of the school or progress that has been made by the new regime. Insofar as the leadership is applying evidence-based practice, the research evidence (for example on effective interventions) is likely to be accessed in indirect and highly processed forms, such as through the guidance of school improvement agencies.*[40]

Godfrey related the research-engaged school to the current policy emphasis on the self-improving school system in England.[41] Those leading research engagement in high-performing schools have a responsibility not just to their own schools but to research engagement across their local network of schools. Godfrey also saw research engagement as a much needed form of professional empowerment at a

> The research-engaged school emphasised the importance of a range of internal sources of data

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[39] Shaughnessy (2011) [40] Wilkins (2011b) [41] Godfrey (2014)

time when government directives and external accountability were in danger of disempowering teachers and school leaders:

> Schools in England need to wrest back some of their own judgement to decide their educational direction... Through a deliberate process of researching and enquiring, a school can create its own criteria by which to judge success and thereby compensate for the pressures of external accountability... Seen in this way, the drive to become a research-engaged school is highly empowering not only to school leaders but also to staff, students, parents and other stakeholders.[42]
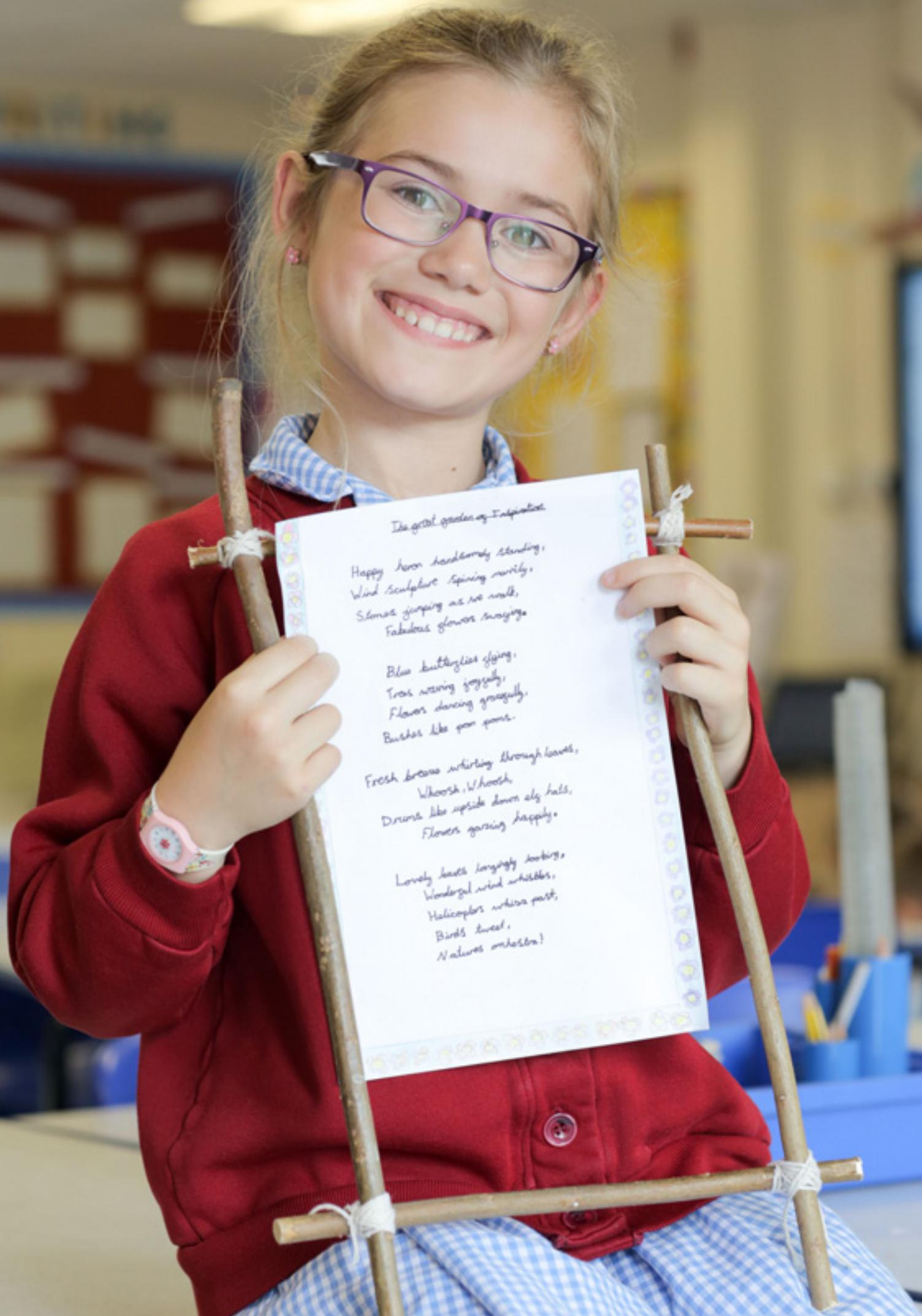
NFER has continued to contribute to thinking about the practicalities of leading a research-engaged school and has published a range of support documents relating to different facets of research engagement. In 2015 NFER launched a Self Review Tool for schools wishing to assess their level of research engagement.[43] The tool invites schools to think about specific conditions for successful research engagement such as leadership commitment, staff participation levels and access to research-related resources. The 2015 NFER approach is based on a model of research engagement that places systematic enquiry at the heart of the school's approach to organisational development. Research is used as the basis for whole-school improvement action. This action is rigorously evaluated for evidence of impact. NFER suggests that any given school development priority should be the subject of an evidence-informed school 'enquiry' that includes the following stages:

- Needs are identified

- Baselines are captured

- Research evidence is consulted

- Time for activity, collaboration and dialogue is scheduled

- Findings are analysed and interpreted

- Learning is embedded into ongoing practice.[44]

The NFER guidance emphasises that research engagement has the potential to be an engine that drives substantial beneficial organisational change. The assumptions behind the guidance are very much in keeping with the original concept of Handscomb and MacBeath that research engagement was a way of doing 'the core business' of school improvement. In a school where research engagement and evidence-informed enquiry is well established, the process produces powerful insights that support positive measurable change.

> The 2015 NFER approach is based on a model of research engagement that places systematic enquiry at the heart of the school's approach to organisational development

[42] ibid (p.4) [43] https://www.nfer.ac.uk/schools/research-in-schools/self-review-tool-for-research-engagement-in-schools.cfm [44] NFER (2015)

The great garden of Inspiration!

Happy heron handsomely standing,
Wind sculpture spining swiftly,
Stones jumping as we walk,
Fabulous flowers swaying.

Blue butterflies flying,
Trees waving joyously,
Flowers dancing gracefully,
Bushes like pom poms.

Fresh breezes whirling through leaves,
Whoosh, Whoosh,
Drums like upside down oily halos,
Flowers gazing happily.

Lovely leaves longingly looking,
Wonderful wind whistles,
Helicopters whizz past,
Birds tweet,
Natures orchestra!

Research engagement in schools: ways forward

There is no single blueprint for research-engaged teaching. The exact level of research engagement for a school depends upon circumstances and the school's context. As Wilkins pointed out in 2011, schools in England in special measures and schools deemed to be outstanding may have different priorities and may choose to have different forms and levels of research engagement. Teaching schools may wish to have a particular emphasis on research engagement, given that research and development is a fundamental responsibility of a teaching school alliance.

What are the essential components of research engagement? Godfrey's 'state of the art' review of research engagement in 2014 suggests five activities that should characterise the research-engaged school in action:

The research-engaged school:

- Promotes practitioner research among its staff

- Encourages its staff to read and be responsive to published research

- Welcomes (as a learning opportunity as well as a responsibility to the wider educational community) being the subject of research by outside organisations

- Uses research to inform its decision making at every level

- Has an outward-looking orientation including research-based links with other schools and universities.[45]

How far does Godfrey's checklist describe your school at the moment? What are the barriers to increased or improved performance against each of these areas of activity?

It is inconceivable to imagine a thriving research-engaged school, along the lines described by Godfrey, without senior leadership team 'buy in' and at least one designated person who can coordinate research-related activities across the school. If research is to inform 'decision making at every level', then research engagement skills must be part of the skillset of school leaders at every level. Research engagement should therefore feature in the job descriptions of staff such

> The exact level of research engagement for a school depends upon circumstances and the school's context

[45] Godfrey (2014, p.5)

as headteachers and subject leaders. The application of lessons from research is fundamentally about professional learning, so an obvious connection can be made between the management of CPD and research engagement.

Local enquiry by research-engaged schools can take many different forms but in every case it should be disciplined, that is to say based on the use of systematic approaches to project design and the evaluation of impact. A research-engaged school needs a basic level of technical capacity in such research techniques as literature review, data analysis, lesson observation and survey design. School-level research can be both qualitative and quantitative, and schools need to be able to make the right 'fitness for purpose' decisions about suitable methods. Understanding the roots of a current problem may require careful qualitative investigation. Testing a promising new approach is likely to be best done using rigorous quantitative methods. There is no reason why schools should not use experimental methods, such as small-scale randomised controlled trials, when exploring the costs and benefits of new methods or approaches. The results are unlikely to be generalisable because of the small scale, but will still constitute a good guide to local action. Promising results from local small-scale experimental studies can also be used by those designing larger-scale studies, thereby avoiding the danger of a top-down regime in the area of knowledge creation.

Do senior and middle leaders in your school have a good understanding of the practical ways that they can use research to inform their decision making? Is the role of the Research Lead clearly defined? How far do teachers have the technical skills needed for research engagement? Are there strong formal links between the use of research and the school's approach to CPD?

An important principle that underpins the work of the research-engaged school is that school professionalism should be evidence-informed but can never be entirely evidence-based. Data that is not derived from research, experience, student and parent voice and professional judgement should also be recognised as essential sources for decision-making by teachers and school leaders. Research-engaged schools should, therefore, see academic research as one necessary professional reference point but an insufficient guide to action.

In terms of the possible transferability of academic research findings, the most powerful evidence derives from rigorous quantitative research, conducted at scale and replicated in different studies and different contexts. We have a professional duty to understand and apply lessons from research of this kind. It would be perverse to ignore this strong evidence but it will not provide us with a comprehensive guide to professional action. There is simply not enough evidence of this type and even where it does exist it will often require adaptation for context. In addition we need to be wary of an exclusively 'top down' model of how evidence is created and transmitted because this will not encourage teachers to undertake their own thoughtful innovation. We need to access and apply the best research of others but we also need to create our own 'local evidence' based on thoughtful innovation that is carefully evaluated. So research-engaged schools should understand academic research but also be involved in their own research enquiries into ways of improving provision and enhancing outcomes.

There is no reason why schools should not use experimental methods, such as small-scale randomised controlled trials, when exploring the costs and benefits of new methods or approaches

Does your school have whole school policies that explicitly reference research findings in areas such as teaching and learning, assessment, behaviour and discipline, homework and special educational needs? Do these policies also draw upon other sources such as insights derived from practitioner research, teachers' experience and consultation with students and parents?

An important characteristic of the research-engaged school is that it seeks to foster successful innovation through methodical enquiry. In any healthy organisation leaders and staff members will be looking for areas that can be improved. There can be a tendency for well-intentioned teachers and school leaders to introduce changes without using either external or internal research findings.

In addition to considering academic research, a school that seeks to innovate through methodical enquiry is likely to undertake four further activities:

- Learning from the practical experience and practitioner research of other schools that have a record of innovation in the relevant area

- Conducting a diagnostic enquiry in school to understand fully the problem that is being addressed

- Establishing a systematic pilot phase during which the innovation is subject to rigorous impact evaluation

- Conducting a further impact evaluation when the changes are 'rolled out at whole school level'.

Of course, the same logic applies when considering innovation at subject or departmental level. Often there will be very little academic research that can be consulted. Subject-level innovation may therefore be even more dependent on methodical teacher enquiry than the application of external research.

Are new approaches systematically evaluated through a pilot phase whenever possible? Is the impact of any major change carefully evaluated once the changes have 'gone live' at whole school level? Do subject teams use similar methods when making changes to practice?

In conclusion, those leading research at school level need to be aware of the problems and possibilities in the use of evidence. Research engagement offers a practical way of tackling the problems and making the most of the possibilities. It can give schools a mechanism for taking control of their own development. Research engagement requires a shift in the way we think about teacher professionalism. In the past, research has often been the preoccupation of a few enthusiasts rather than an integral part of teacher professionalism. In the future, awareness of the need to use the best available evidence should surely be expected from all teachers.

Research engagement offers a balance between the application of external research findings and insights from local enquiry and experience. Teaching can never be entirely scripted in line with research findings. Research engagement, properly managed, can enable schools to learn from the research of others and also create their own context-specific professional knowledge about the best ways of solving the problems of school education in the 21st century.

> We need to access and apply the best research of others but we also need to create our own 'local evidence' based on thoughtful innovation that is carefully evaluated

References

Alexander, R. (2010) 'World class schools – noble aspiration or globalised hokum?' *Compare: a journal of comparative and international education*, 40 (6), 801–817.

Bailey, R., Pearce, G., Winstanley, C., Sutherland, M., Smith, C., Stack, N. & Dickenson, M. (2008) *A systematic review of interventions aimed at improving the educational achievement of pupils identified as gifted and talented.* London: EPPI-Centre.

Biesta, G. (2007) 'Why "what works" won't work: evidence-based practice and the democratic deficit in educational research', *Education theory,* 57 (1), 1–22.

Coe, R., Fitz-Gibbon, C. & Tymms, P. (2000) *Promoting evidence-based education: the role of practitioners.* British Educational Research Association Annual Conference, September 2000.

Davies, N. (2015) *Advocates of RCTs in education should look more closely at the differences between medical research and education research*' [Online] available from: <http://blogs.lse.ac.uk/politicsandpolicy/theres-no-such-thing-as-a-free-rct-a-response-to-goldacre-and-gove/>

DfE (2013) *Building evidence into education.* [Online] available from: <https://www.gov.uk/government/news/building-evidence-into-education>

Furedi, F. (2013a) *Scientism in the class room: opinion masquerading as research.* Presentation at researchED conference, Dulwich College, 7 September 2013.

Furedi, F. (2013b) 'Teaching is not some kind of clinical cure', *TES,* 4 October 2013, 24–25

Furedi, F. (2013c) 'Keeping the scourge of scientism out of schools', *Spiked,* 9 September 2013. [Online] available from: <http://www.spiked-online.com/newsite/article/dont_import_the_scourge_of_scientism_into_schools/14005#.VVMBHFew6L0>

Godfrey, D. (2014) 'Leadership of schools as research-led organisations in the English educational environment: cultivating a research-engaged school culture'. *Educational management, administration and leadership.*

Goldacre, B. (2013) *Building evidence into education.* [Online] available from: <http://media.education.gov.uk/assets/files/pdf/b/ben%20goldacre%20paper.pdf>

Goldstein, H. & Woodhouse, G. (2000) 'School effectiveness research and educational policy', *Oxford review of education,* 26 (3/4), 353–363.

Gorard, S. (2010) 'Serious doubts about school effectiveness', *British educational research journal,* 36 (5), 745–766.

Hammersley, M. (2001) *Some questions about evidence-based practice in education.* Annual Conference of the British Educational Research Association, September 2001.

Hammersley, M. (2002) *Educational research, policymaking and practice.* London: Paul Chapman/Sage.

Hammersley, M. (2013) *The myth of research-based policy and practice.* London: Sage.

Handscomb, G. & MacBeath, J. (2003) *The research engaged school.* Chelmsford: Essex County Council.

Hargreaves, D. (1996) *Teaching as a research-based profession: possibilities and prospects.* The Teacher Training Agency annual lecture 1996.

Hattie, J. (2009) *Visible learning.* London: Routledge.

Haynes, L., Service, O., Goldacre, B. & Torgerson, D. (2012) *Test, learn, adapt: developing public policy with randomised controlled trials.* London: Cabinet Office, Behavioural Insights Team.

Hillage, J., Pearson, R., Anderson, A. & Tamkin, P. (1998) *Excellence in research on schools.* Sudbury: DfEE.

Mansell, W. (2008) 'Research reveals teaching's Holy Grail', *TES,* 21 November 2008. [Online] available from: <https://www.tes.co.uk/article.aspx?storycode=6005393>

NFER (2015) *Self-Review Tool for research engagement in schools and other education providers.* [Online] available from: <https://www.nfer.ac.uk/schools/research-in-schools/self-review-tool-forresearch-engagement-in-schools.cfm>

Research in practice (2006) *Firm foundations.* [Online] available from: <https://www.rip.org.uk/resources/publications/practice-tools-and-guides/firm-foundations-a-practical-guide-toorganisational-support-for-the-use-of-research-evidence/>

Reynolds, D. & Farrell, S. (1996) *Worlds apart? A review of international surveys of achievement involving England.* London: Ofsted.

Rutter, M., Maughan, B., Mortimore, P. & Ouston, J., with Smith, A. (1979) *Fifteen thousand hours: secondary schools and their effects on children.* Cambridge MA: Harvard.

Sackett, D., Rosenberg, W., Gray, J., Haynes, R. & Richardson, W. (1996) 'Evidence-based medicine: what it is and what it isn't', *BMJ,* 312

Sammons, P., Hillman, J. & Mortimore, P. (1995) *Key characteristics of effective schools: a review of school effectiveness research.* London: Ofsted.

Sharp, C., Eames, A., Sanders, D. & Tomlinson, K. (2006) *Leading a research-engaged school.* Nottingham: NCSL.

Sharp, C., Eames, A., Sanders, D. & Tomlinson, K. (2005) *Postcards from research-engaged schools.* Slough: NFER.

Shaughnessy, M. (2011) *An interview with Raphael Wilkins: how can research aid school development?* [Online] available from: <http://www.educationviews.org/an-interview-with-raphaelwilkins-how-can-research-aid-school-development/>

Slavin, R. & Fashola, O. (1998) *Show me the evidence! Proven and promising programs for America's schools.* Thousand Oaks CA: Corwin Press.

Stewart, W. (2015) 'Leave research to the academics, John Hattie tells teachers', *TES,* 22 April. [Online] available from: <https://www.tes.co.uk/news/school-news/breaking-news/leave-researchacademics-john-hattie-tells-teachers>

Tooley, J. & Darby, D. (1998) *Education research: an Ofsted critique.* London: Ofsted.

Wiliam, D. (2015) 'The research delusion', *TES,* April 10, 2015.

Wilkins, R. (2011a) *Research engagement for school development.* London: IOE.

Wilkins, R. (2011b) *School research engagement: whose agenda? Mapping the landscape for school leaders.* ICSEI Conference, 2011.

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CfBT was established nearly 50 years ago; since then our work has naturally diversified and intensified and so today, the name CfBT (which used to stand for Centre for British Teachers) is not representative of who we are or what we do. We believe that our new company name, Education Development Trust – while it is a signature, not an autobiography – better represents both what we do and, as a not for profit organisation strongly guided by our core values, the outcomes we want for young people around the world.