

## **How can evidence inform teaching and decision making across 21,000 autonomous schools?: learning from the journey in England**

### **Overview**

The evidence that research can impact positively on teacher practice and school improvement is strong. The challenge is how to make it happen. School systems around the world are grappling with this challenge, but there are relatively few evaluations of specific strategies for mobilising evidence to improve practice.

Millions of pounds have been spent in England over the past 20 years on initiatives aimed at improving evidence-informed practice, yet it seems that they have had limited impact. Why is this? What are the implications of the current government's push for more autonomous schools and a self-improving system? The chapter concludes by outlining six emerging claims for mobilising evidence that reflect findings from recent empirical projects and highlights some of the implications for policy and practice.

### **The case for developing evidence-informed practice**

There are many arguments for why we need an evidence-informed culture in education, but the strongest arguably comes from cases where research is failing to impact on practice, even though the implications are clear cut. For example, Levin *et al*/surveyed district leaders and secondary school principals in Canada and found that many are not aware of and/or do not adopt well evidenced findings (Levin et al, 2009 and 2011). As a result he concludes:

*The injunction to doctors is 'First do no harm'. Yet, because schools, groups of schools and indeed whole national systems have such weak systems for analysing evidence, it seems likely that quite a bit of harm is inadvertently being done. (Levin, 2013, p 20)*

More prosaic, but equally important, is the growing correlational evidence that where research and evidence are used effectively as part of high quality initial teacher education and continuing professional development, with a focus on addressing improvement priorities, it makes a positive difference in terms of teacher, school and system performance (Mincu, 2013; Cordingley, 2013).

The experience of 'research-engaged' schools that take a strategic and concerted approach in this area is generally positive. These studies suggest that research engagement can shift a school from an instrumental 'top tips' model of improvement to a learning culture in which staff work together to understand what works, when and why (Godfrey, 2014; Sharp et al, 2006; Handscomb and MacBeath, 2003). That said, there is at least one recent example of an academy where the entire leadership team undertook post-graduate study supported by its university sponsor, yet student outcomes and Ofsted performance both declined. Of course the two things might not be connected, but it is a reminder that research engagement is not a straightforward panacea in a highly accountable school system.

Despite these arguments in favour of evidence-informed practice, there is a widespread view that education remains backward in this respect, for example when compared with the medical profession (Hargreaves, 1996). The most recent articulation of this view came from Dr Ben Goldacre in his report commissioned by the Department for Education (DfE, 2013).

Goldacre argued that we need an 'information architecture', including: networks of practitioners to identify relevant research questions; local trials units supporting frequent low-cost Randomised Controlled Trials (RCTs); and 'journal clubs' in schools where practitioners could critique findings from research and develop their understanding of research methods.

Goldacre's report is helpful in reminding us that the development of an evidence-based culture in medicine is a relatively recent phenomenon: culture change across an entire profession is possible, even if it might take a generation to achieve, although some observers have argued that education is not the same as medicine in various ways (BERA, 2013).

Goldacre's core argument that we need more Randomised Controlled Trials in educational research is timely and helpful, but it should not be taken too simplistically. There are genuine arguments about how evidence from different sources and methodologies should be valued and prioritised and the extent to which 'best practice' recommendations can be derived from such reviews (Nutley, Powell and Davies, 2013). Thus, Goldacre's proposed 'information architecture' can be seen as a necessary but not sufficient step if we are to see genuine changes in practice across 21,000 schools (Helmsley Brown, 2008; Levin et al, 2011). (212 words)

### **What can we learn from previous attempts to develop evidence-informed practice in education?**

So what can we learn from previous attempts to develop evidence-informed approaches in education? The truth is that many millions of pounds have been spent over the past 20 years on initiatives aimed at addressing the evidence issues facing policy and practice in education, mainly under the 1997 to 2010 New Labour government. One high profile example is the Teaching and Learning Research Programme (TLRP) which received over £40 million from the Economic and Social Research Council (ESRC) to build the supply of high quality evidence; but there are many more and I set out a more comprehensive list in the appendix to this chapter. {outlined as an appendix}.

Nelson and O'Beirne (2014), Gough (2013), Morris (2009) and others have set out these initiatives and the evidence for their impact. Key strands included:

- the Teaching and Learning Research Programme (TLRP), which received over £40 million from the Economic and Social Research Council (ESRC) to build the supply of high quality evidence,
- the National Education Research Forum (NERF), which had a remit to develop a strategic approach to evidence-informed practice,
- various resource banks, such as the Teacher Training Resource Bank (TTRB),
- various networks, such as the National Teacher Research Panel (NTRP),
- various schemes which enabled teachers, leaders, schools and networks to undertake research, such as the Best Practice Research Scholarships scheme and the National College's Research Associates scheme, and
- funding to support post-graduate study by teachers, in particular the Teacher Training Agency's Post-Graduate Professional Development scheme.

In addition to these initiatives which were overtly aimed at enhancing the supply of high quality evidence and increasing capacity on the demand-side, the Labour government also spent many millions more on commissioning and disseminating research, both directly and via large-scale professional development programmes and toolkits. Freedman, Lipson, and Hargreaves (2008) estimate that Labour invested £342m in CPD programmes for schools in 2007-08 through the National Strategies, Training and Development Agency and Local Authorities. (216 words)

What is the evidence of impact from this investment? Of course, it is impossible to assess this in its totality. There is an argument that schools have become more data-rich and more evidence-informed over that 20-year period, but it is hard to attribute this to any specific initiatives rather than, say, the requirements of the accountability system for annual school self-evaluations.

Turning to the evaluations that were undertaken on some of the specific programmes, Nelson and O'Beirne (2014: 14) cite the evaluation of TLRP which show relatively limited impact beyond the participating schools given the scale of investment. In his review of the New Labour initiatives David Gough (2013) argues that their relative failure to achieve impact was due to a number of factors: they were not given time to bed in; they lacked central coordination; and there was too much emphasis on enhancing the 'push' of research and not enough on increasing demand for research in schools.

### **What can we learn from other countries and sectors?**

So have other school systems and sectors addressed this challenge in ways that England could learn from? Levin et al's recent international review (2013) indicates that there are no easy answers, but a number of high-performing Asian education systems are making more systematic efforts to address them. These include dedicated research institutes (e.g. Singapore), a requirement on all teachers to undertake and publish research each year (Shanghai) and the identification and development of a cadre of high potential teachers as research experts and communicators (Shanghai and Korea). What is interesting about these models is that they do not assume a top-down model of 'best-practice' identification and dissemination. For example, Nutley, Powell and Davies (2013) cite Hogan et al's study of Singapore:

*The approach taken by the Singapore national government.. has been on facilitating local autonomy at school and school cluster levels. A top-down process of knowledge dissemination around effective practices is rejected in favour of shifting the locus of knowledge production to schools so that they co-produce the research agenda and collaborate with researchers in knowledge creation and on-going learning.*

Similarly, Jensen et al's (2012) study of Shanghai emphasises the requirement for all teachers to undertake research as well as the system design features – most importantly a significantly smaller teaching workload than in England – that enable this to happen. (231 words)

### **Mobilising knowledge in practice is a messy social process**

The limited impact of New Labour's models, which in essence were largely top down in nature, chime with some of the wider findings on knowledge mobilisation. These show that

evidence does not translate into simple, linear changes in practice. Instead, evidence must inform what is ultimately a messy social change process, whether at the level of the individual practitioner, the school or the system. Reflecting this fact, many observers have argued that the title 'evidence-based practice' is misleading, preferring titles such as 'evidence-informed practice' and 'knowledge animation' (for example Stoll, 2008).

The findings from these studies on knowledge mobilisation can be summarised as follows (Brown and Rogers, 2014; Nelson and O'Beirne, 2014; Cordingley, 2013; Nutley, Walters and Davies, 2007; Rycroft-Malone, 2008; Handscomb and MacBeath, 2003; Sharp, Eames, Saunders and Tomlinson, 2006; Thomas and Pring, 2004; McLaughlin, Black-Hawkins and McIntyre, 2004):

- There are widespread concerns about the quality, relevance and accessibility of much educational research.
- There is a role for clear and accessible research summaries, with a focus on implications and next steps.
- Intermediary bodies and external facilitators are important as they can help busy practitioners to access and engage with evidence.
- Nevertheless, teachers are most likely to trust their peers over other sources, so it is important to consider how informal social networks and peer learning can support knowledge mobilisation efforts.
- Even where schools and teachers do access and engage with evidence, they are unlikely to 'apply' the findings in a simplistic or mechanistic way. Evidence must be contextualised and combined with practice-based knowledge (ie transformed) as part of a wider collaborative professional learning process.
- Leadership commitment and organisational climate coupled with practical resources and support (including in terms of time and training) are key factors which influence whether or not teachers will engage with evidence, but many school cultures and systems are not conducive to evidence-informed improvement.
- School and practitioner-led research and enquiry are dismissed by many (including Goldacre) due to concerns about the small scale and lack of rigour in such approaches. However, the most recent review for NFER argues that practitioner research can play a range of useful roles, ranging from personal development, to school self-review and improvement, to generating knowledge for the wider system.

What is less clear from the list above is that teachers and leaders also face wider barriers to adopting evidence-informed approaches. For example, a survey by the National Teacher Research Panel (National Teacher Research Panel survey, 2010) found that even teachers who value research say that they face a number of challenges in accessing and using evidence, including lack of time, a lack of accessible/practical research summaries and a lack of support from leaders. The time and workload challenges appear to be particularly acute in England, with evidence that teachers work longer hours and are less likely to engage in sustained professional development than their international peers (Micklewright et al, 2014).

### **The 'self-improving school-led system' in England: what are the challenges for knowledge mobilisation?**

New Labour's approach to school improvement and system reform was predominantly top-down, albeit with a significant role for Local Authorities in both challenging and supporting schools. One indicator of this is that Labour's time in office saw a proliferation in the number

of national agencies (quangos) and 'field forces' (teams of consultants charged with rollout and the implementation of national policy).

However, from around 2005 onwards Labour began to recognise the limitations of top down reform and sponsored the development of more bottom-up approaches. One example is the National Leaders of Education scheme, which designated successful leaders and schools and then brokered them to support struggling schools (Matthews and Hill, 2008 and 2010).

The Coalition government elected in 2010 chose to build on some of Labour's foundations, for example by expanding school to school support as the key mechanism for school improvement (Sandals and Bryant, 2014; Earley and Higham, 2012). However, it would be a mistake to imply that the Coalition's approach is simply an extension of Labour's journey: the differences in philosophy and approach are quite stark.

The main theme of the Coalition's approach has been to develop a 'self-improving school-led school system' in which schools are autonomous and accountable, with increased diversity and choice for parents through free schools, and with a radical reduction in central and local oversight. Based on an analysis of the white paper and related documents I have suggested that the Coalition has four core criteria for the self-improving system (Greany, 2014):

- Teachers and schools are responsible for their own improvement
- Teachers and schools learn from each other and from research so that effective practice spreads
- The best schools and leaders extend their reach across other schools so that all schools improve
- Government support and intervention is minimised.

These criteria signal the importance of partnerships between schools as a key feature of the self-improving system. This is intended to mitigate the risk of stand-alone schools failing and to address systemic challenges that cannot be addressed by single schools competing against each other. A range of partnership and system leadership models have developed since 2010, but two models have formed the centre-piece of Coalition policy:

- academy chains: groups of schools that are overseen by a single Multi-Academy Trust (MAT) or, occasionally, an Umbrella Trust. By 2014, more than half of all academies were in a chain, and more than 60% of primary academies (DfE, 2014).
- Teaching Schools: these are outstanding schools that are designated to co-ordinate initial and continuing professional development, school to school support and Research and Development across an alliance of partner schools (Matthews and Berwick, 2013). By June 2014 587 Teaching Schools had been designated.

Thus it can be seen that the architecture of the 'self-improving system' is very different to Labour's model, with significant implications for knowledge mobilisation and evidence-informed practice.

Under Labour, the vast majority of schools remained under the influence of their Local Authority, which had a role in collating and sharing expertise and evidence across schools. The plethora of agencies, toolkits and training programmes helped ensure that evidence was codified and disseminated nationally. Universities played a key role, leading the bulk of Initial Teacher Training and with significant numbers of teachers undertaking subsidised Masters degrees.

Under the Coalition it is very clearly schools that are in the driving seat:

- the quangos have been closed or stripped back;

- Local Authorities have lost the bulk of their resources and capacity as schools have become academies;
- schools are increasingly driving the content and design of Initial Teacher Education through the expansion of School Direct<sup>1</sup>; and
- Teaching Schools<sup>2</sup> play a lead role in defining and disseminating effective practice through their Research and Development function and CPD provision.

This model presents significant opportunities for schools as well as challenges. In terms of the challenges, perhaps the most significant is the emerging evidence that while many schools are seizing the opportunities afforded by the new framework, many others are not. For example, around four in five schools have not yet adopted academy status, while only around half of all schools are expected to be part of a Teaching School alliance by 2015. Thus there is a risk of a two-tier system emerging, with some schools thriving but others floundering because they do not have access to the knowledge and expertise they need to improve.

Another challenge is the limited capacity available within schools to take on these new roles. This seems to be particularly true in relation to Research and Development. The interim evaluation of Teaching Schools (Gu *et al* 2014) reflects considerable progress overall but also flags the unreasonable and unsustainable workload required to establish the alliances. It states that some alliances see the R&D role as underpinning everything they do and have developed rich relationships with their university partners, but that others have not prioritised R&D, find it daunting and/or feel that it is under-funded.

One final overarching issue for knowledge mobilisation in a self-improving system is the role of school accountability and its impact on competitive behaviours between schools. As other forms of support for schools have been removed and the accountability bar has been consistently raised, there is an argument that England's regime is flattening the very freedom and autonomy that the Coalition wants to encourage, meaning that schools look up to second guess what they think the inspectorate wants to see (rather than at the evidence base) and hide their effective practice from their competitor schools (Waldegrave and Simons, 2014).

### **So what is to be done? Mobilising evidence in a 'self-improving' school system**

This section sets out a series of emerging claims on knowledge mobilisation and identifies potential implications for policy and practice. The emerging claims were developed by the author together with his colleagues at the London Centre for Leadership in Learning, Dr Chris Brown and Professor Louise Stoll. The emerging claims are drawn from a number of studies that the team members have either recently completed or are currently engaged in, as set out in Table 1.

#### **Table 1: Recent and ongoing LCLL knowledge mobilisation studies that have informed the emerging themes**

<sup>1</sup> School Direct gives successful schools responsibility for working with an accredited provider of teacher training to recruit trainees and shape their training experience. By 2014-15 almost half of all teacher training places in England were allocated via School Direct.

<sup>2</sup> The Coalition's 2010 white paper *The Importance of Teaching* (DfE, 2010) announced the intention to designate 500 outstanding schools as Teaching Schools that would lead initial and continuing professional development, school to school support and Research and Development in partnership with an alliance of schools.

Name and funder	Summary	Research team	Timescale
<p>Middle leaders as catalysts for improving teacher practice: developing a knowledge exchange and impact network with Challenge Partner schools</p> <p>ESRC Knowledge Exchange Opportunities Scheme</p>	<p>Established and supported a network of middle leaders across Challenge Partner schools, who then extended their learning to their partner schools.</p> <p>A parallel evaluation sought to assess the impact on knowledge sharing between schools.</p>	<p>Professor Louise Stoll, Dr Chris Brown, Karen Spence-Thomas and Carol Taylor London Centre for Leadership in Learning, Institute of Education, University of London with Challenge Partners</p>	<p>2013-14</p>
<p>R&amp;D themes research on great pedagogy and great CPD with Teaching Schools.</p> <p>Additional research into how Teaching Schools are developing their R&amp;D approaches</p> <p>National College for Teaching and Leadership</p>	<p>The teaching schools network agreed three national themes as the focus of their research activities for 2012-14:</p> <ul style="list-style-type: none"> <li>• What makes great pedagogy?</li> <li>• What makes great professional development which leads to consistently great pedagogy?</li> <li>• How can leaders lead successful teaching school alliances which enable the development of consistently great pedagogy?</li> </ul> <p>The IOE and SHU have supported 66 TSAs to undertake R&amp;D under themes 1 and 2. An initial literature review on each theme was shared and a logic model developed to underpin the project. Alliances have used the Connecting Professional Learning methodology (Harris and Jones, 2012) and reported progress and findings using the framework.</p> <p>Early in 2014 funding from NCTL enabled the IOE/SHU team to undertake additional case studies and a survey to investigate how TSAs are developing their R&amp;D approach.</p>	<p>Institute of Education and Sheffield Hallam University</p>	<p>2012-2014</p>
<p>School-university partnership learning initiative</p> <p>Research Councils UK and the National Co-ordinating Centre for Public Engagement</p>	<p>The school-university partnership learning initiative was commissioned to inform the potential for an ongoing programme of work aimed at enhancing the quality and impact of school-university partnerships.</p> <p>The project involved a literature review, a series of semi-structured interviews, a survey of universities, schools, funding bodies, the third sector, professional bodies/learned societies and policy makers and a project</p>	<p>Toby Greany (Institute of Education), Qing Gu (Nottingham University), Graham Handscomb (independent) and Matt Varley (Nottingham)</p>	<p>2014</p>

	workshop.	Trent University).	
Evaluation of DfE's approach to developing evidence-based practice (with Sheffield Hallam and Durham)	The DfE has developed a logic model within which it has started to take action to improve the system of Evidence-Based Teaching. The evaluation will track progress towards a system within which the teaching profession can improve practice through the rigorous use of robust evidence, and DfE's role in facilitating the process. The evaluation will include a live evidence review, content analysis of policy and school-level documents, qualitative interviews and the development of a matrix of engagement.	Toby Greany, Louise Stoll and Chris Brown (IOE), Mike Coldwell and Bronwen Maxwell (Sheffield Hallam) and Steve Higgins (Durham)	2014-2016
IOE R&D network <a href="http://www.ioe-rdnetwork.com/">http://www.ioe-rdnetwork.com/</a>	The IOE R&D network aims to build on the Institute's existing research partnerships with schools to make them more sustainable and effective. The network was developed based on extensive consultation and prototyping with over 100 schools in 2013-14. It aims to build expertise and capacity for high quality collaborative research and development. It reflects a series of core principles reflecting a commitment to partnership, equity and impact.	Led by Toby Greany and Karen Spence-Thomas on behalf of the IOE	Launched in 2014
Research Learning Communities  Education Endowment Foundation	This project is exploring ways to build the capacity of primary schools to use evidence. It is working with an intervention group of 58 primary schools. A senior leader and 'evidence champion' from each school will work as part of a community of 5-6 schools to explore the evidence relating to an agreed improvement theme. They will come together for four workshops each year to examine the research and to develop, apply and evaluate school improvement strategies which reflect this evidence.	Led by Dr Chris Brown, with Toby Greany, Louise Stoll and a team from the IOE.  The project will be evaluated by Bristol University as an RCT	2014-16

(679 words)

There are six emerging themes from these projects so far. These are presented along with illustrative examples from practice and further research and resources.

**1. Developing evidence-informed practice within and across schools requires strategic leadership that can shape and implement a shared vision, with clarity on what success looks like whilst welcoming complexity and unanticipated outcomes.**

Examples:

The Mead Teaching School Alliance in Wiltshire uses a knowledge mobilisation framework (Spiral) and has trained up Specialist Leaders of Education from across the Alliance to support R&D in Innovation Hubs:



<http://www.themead.wilts.sch.uk/wilts/primary/themead/site/pages/teachingschool/researchanddevelopment> accessed 30/10/14

Swiss Cottage Teaching School gives teachers one hour a week for R&D, runs a Research Journal Club and has appointed a Director of R&D. See <http://www.swisscottagedrc.org/> accessed 30/10/14

Resources:

- *Teaching schools national research and development network: conference report.* Sara Bubb, (2013) NCTL.
- The overarching report on the three R&D themes (Stoll, NCTL, forthcoming) and on the additional research into how Teaching Schools support R&D (Greany and Maxwell, NCTL, forthcoming).

**2. This requires distributed approaches to harnessing knowledge and promoting change. For example tapping in to social networks (informal leadership) within schools, or finding more formal ways to bring experts and practitioners (or practitioners and others) together.**

Examples:

The IOE's Research Learning Communities project is using a social network analysis questionnaire to identify who the key 'evidence champions' are within participating primary schools. The project will test the effectiveness of these champions in mobilising evidence when they work alongside leaders in more formal senior roles. See: <http://educationendowmentfoundation.org.uk/projects/research-learning-communities/> accessed 30/10/14

The growth in social media such as Twitter and Teachmeets has enabled an explosion in opportunities for teachers and leaders to engage with and debate research and evidence (albeit with minimal quality control). A question for leaders is whether you are doing enough to encourage staff to engage in these opportunities and to evaluate the impact?

**3. In larger schools or across partnerships, middle leaders can be vital catalysts for animating evidence in practice, but they need capacity and support from senior leaders if they are to succeed in this role.**

Examples:

Middle leaders are often dubbed the 'engine room of improvement', but this can leave them feeling trapped in their own schools, with few opportunities to connect and share their expert knowledge with other middle leaders and teachers, especially in other schools. The ESRC funded Middle leaders as Catalysts project has explored practical ways to address this, through the development of simple knowledge exchange tools. The results will be published in 2015.

The Harris Federation in London is offering the IOE's Leading Research and Development Within and Across Schools module as part of its school-based Masters in Leadership. See [http://www.ioe.ac.uk/study/MMALEL\\_15.html](http://www.ioe.ac.uk/study/MMALEL_15.html) accessed 30/10/14

**4. Professional learning must be collaborative, challenging, sustained and supported. When it comes to evidence use, professional learning must also involve co-creation – bringing together knowledge from practice and knowledge from research to create knowledge that is new to everyone in the room.**

Examples:

The WANDLE alliance in London has invited all staff from across six participating secondary schools to join themed Joint Practice Development Groups. These are facilitated by trained school staff who are given research resources as a starting point for development work in their groups. See:

[http://www.chesterton.wandsworth.sch.uk/media/assets/file/WTSA\\_newsletter\\_Issue\\_3\\_March\\_2014\\_final.pdf](http://www.chesterton.wandsworth.sch.uk/media/assets/file/WTSA_newsletter_Issue_3_March_2014_final.pdf) accessed 30/10/14

The Woodroffe Teaching School in Dorset offers a professional Master's programme to staff across the alliance in partnership with Bath Spa University. The alliance also has its own CPD programme and supports teachers from different schools to work in threes using a Lesson Study format supported by a Specialist Leader of Education (SLE). See:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/330579/how-teaching-schools-are-making-a-difference-part-2.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/330579/how-teaching-schools-are-making-a-difference-part-2.pdf) accessed 30/10/14

**5. School-university partnerships can support much of the above, but most are weak due to issues of culture and capacity. Successful partnerships depend on local leaders who can create a 'third space' which gets the best from research and practice.**

Examples:

Black and Wiliam's 'black box' (1998) research on formative assessment was founded on a comprehensive review of evidence, but this was then tested and developed through action research with schools in Medway and Oxfordshire to identify practical implementation strategies. See: <http://www.oecd.org/edu/ceri/34260938.pdf> accessed 30/10/14

A number of school-university research networks and partnerships exist to enable similar work – such as at Manchester, Cambridge, Winchester/Expansive Education and the Institute of Education – as well as non-university partnerships such as the National Teacher Enquiry Network and Whole Education. See: *School-University Partnerships: Fulfilling the Potential - Summary Report*, Greany, Gu, Handscomb and Varley, NCCPE, forthcoming

**6. Policy and funding have a significant role to play in creating an enabling framework for evidence-informed practice. Key roles include: ensuring coherence, quality and a focus on public engagement in research commissioning programmes; ensuring research is accessible and quality assured; and building capacity and demand within and across schools.**

Examples:

Some of these activities are already partly in place, for example through the EEF Pupil Premium/Teaching and Learning Toolkit.

<http://educationendowmentfoundation.org.uk/toolkit/>

The Labour party has called for an Office for Educational Improvement, which would provide independent advice on reform strategies, potentially building on the What Works Centre role currently played by the Education Endowment Foundation. See: <http://educationendowmentfoundation.org.uk/about/what-works-network/>

In my inaugural lecture I called on the EEF to allocate 25% of all its future funding on knowledge mobilization activity.

## **Conclusion**

Jo Rycroft Malone captures the issues involved in mobilizing evidence perfectly:

*In a contact sport such as ice hockey or rugby, the interaction between a number of different elements determines the nature of the game, the spirit in which it is played, and the ultimate outcome – win or lose. The same could be said of getting evidence into practice: it is the interaction of various ingredients that determines the success of the outcome. (2005)*

There are no easy answers for designing a messy social process. Achieving change will take time, commitment and leadership at many levels: within schools, across schools and nationally. Whilst in some respects the shift to an autonomous self-improving system makes this harder, by removing mechanisms for synthesizing and sharing evidence between schools, it also seeks to learn from the pitfalls of a top down approach by giving greater power to the users of evidence, the schools and teachers who can use it to best effect.

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