Department for Education

Evidence-informed teaching: an evaluation of progress in England

Research report

July 2017

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In August 2014, The Department for Education (DfE) commissioned a two-year study to assess progress towards an evidence-informed teaching system. In this report, the term evidence-informed teaching is used to mean practice that is influenced by robust research evidence. Schools and teachers are referred to as more or less 'research-engaged' depending on the extent to which they support and undertake evidence-informed practice, specifically teaching. Evaluating evidence-informed teaching is complex and challenging, so a pragmatic evaluation approach was agreed that included:

- A continually updated evidence review including two strands: a review of key literature examining the relationship between engagement with research evidence and teaching, and interviews with leaders of seven projects that were all aimed at developing aspects of research use in England.
- A content analysis, to examine the extent to which evidence-informed teaching is discussed in the public domain, of the following materials:
    - a set of 75 policy documents produced by government and other policy actors;
    - websites of 65 teaching schools and 100 randomly chosen schools, compared at two time points;
    - social media outputs referencing evidence-informed teaching and specific outputs of known influential educational social media users.
- A set of qualitative interviews in primary, secondary and special schools consisting of:
    - case studies of 15 schools selected to give a range of levels of engagement with evidence-informed teaching (comprising 82 interviews overall) including interviews with the head teacher, a middle leader and a classroom teacher in the first year of the study, and with the head teacher, CPD/research lead and the same classroom teacher in the second year;
    - interviews, in the second project year, with senior leaders and teachers in five schools identified as being highly engaged with research;
    - interviews, in the second year of the project, with leaders from three further schools that had previously been strongly engaged with research but appeared to have poorer outcomes than would be expected.

Prior research, synthesised in the evidence review and discussed in detail in Appendix 1, indicates that strategies and structures to support the development of evidence-informed teaching need to be multi-dimensional: this includes the nature of research and evidence itself as well as effective communication of this research. It should be noted here that whilst the term 'Evidence-based Teaching' was used at the start of the project, much of this research and subsequent comments from interviewees during this study use the term 'evidence-informed' teaching. This term emphasises that teaching, as a complex, situated professional practice, draws on a range of evidence and professional judgment, rather than being based on a particular form of evidence. Synthesis of earlier research

undertaken as part of the evidence review indicates that in the study we were likely to find variation in:

(1) Teachers' needs, experience and skills.
(2) The characteristics of the school contexts in which teachers work.
(3) The wider policy context.

Drawing on this framework, the findings of the study examining the school system in England are summarised below, at a number of system levels:

- Teacher level: analysis of teacher interview data.
- School/organisational level (school context): analysis of highly performing schools; data from interviews with school leaders; analysis of school websites.
- National level (wider context): analysis of policy documents emanating from key policy actors; analysis of tweets; evidence from leader and teacher interviews.

Findings

In the main body of the paper, we separate access to research evidence, engagement with research evidence and use of research evidence as distinct areas[1]. We found these were closely intertwined, so for the purposes of this summary we refer to all three elements together.

Teacher level

KEY FINDINGS: For teachers, evidence-informed teaching usually meant drawing on research evidence (directly or as translated by school leaders) to integrate and trial in their own practice, rather than directly applying research findings.

Teachers' use of research evidence was prompted by a need to solve a practical problem: for the more research-engaged teachers, research was part of the evidence base they used to achieve this.

Most teachers interviewed did not feel confident in engaging with research directly, or feel able to judge its quality, relying on senior leaders and other organisations like the Sutton Trust and the Education Endowment Foundation (EEF). The exceptions were those

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[1] *Awareness*, in this study, was defined as understanding what research evidence is; knowing how to access research evidence; being able to judge how robust research evidence is; knowing that research evidence can help improve practice and how it does that; and knowing how to go about being 'evidence-informed'. *Engagement* with research was defined as thinking that it is important to draw on research evidence to inform and improve practice, and having conversations about the evidence. *Use* was defined as any activity where research evidence is actively used to investigate and change practice.

undertaking higher level academic study. There was some evidence from the interviews that teachers were feeling better equipped to engage with research over time.

Most teachers valued research evidence. Whilst some teachers did not see the value of external research, most did, and this was influenced by:

- The value placed on it by senior leaders and, crucially,
- **The need for such evidence to be problem- and practice-focused**.

Teachers trusted research evidence when it was supported by other evidence sources. Most teachers were unlikely to be convinced by research evidence on its own: they needed to have this backed up by observing impact themselves or hearing trusted colleagues discuss how it had improved their practice and outcomes for young people. External research evidence could challenge teachers' beliefs about their practice, but even in the most research-engaged schools such evidence was only seen to lead to sustained change in practice if there was time for informed debate and teachers to see the impact in practice.

Conversations about decision-making in the more research-engaged schools included questions about research, typically: 'what does the evidence show'? Conversations about research were typically focused on practice-based problems, and how research evidence might contribute to dealing with them: the phrase 'the evidence shows that…' or questions like 'what does the evidence show?' were common in the most research-engaged schools.

There was limited evidence from this study of teachers directly importing research findings to change their practice. Rather, research more typically informed their thinking and led - at least in the more engaged schools - to experimenting, testing out and trialling new approaches in more or less systematic ways.

Organisational level

KEY FINDING: The most strongly research-engaged schools were highly effective, well-led organisations within which 'research use' meant integrating research evidence into all aspects of their work as part of an ethos of continual improvement and reflection.

In the most highly research-engaged schools, senior leaders played a key role, acting as intermediaries and facilitators of access to, engagement with and use of research evidence for staff in their schools. To do so, they often had direct access to research producers and were familiar with key intermediaries like the EEF, the work of John Hattie (Hattie, 2008) and other reviews such as the Cambridge Primary Review (Alexander and Armstrong, 2010). They were confident in judging the robustness of research quality.

The most research-engaged schools started from a school priority and sought evidence to help meet this priority. This could be a school improvement priority or other problem. The most research-engaged leaders were able to synthesise the research evidence with other forms of evidence including school data and the experiences of other teachers and schools. In the less research-engaged schools, research evidence was often seen as a lower priority than other forms of evidence. This carried a risk that their decisions could be less effective than if they had considered all the relevant evidence.

More research-engaged schools were leading or taking part in external research projects, and focused on collaborative research within and outside the school. Less research-engaged schools tended not to do this.

Highly research-engaged schools supported evidence-informed risk-taking. They had reflective cultures, using research to inform Continuing Professional Development (CPD) and development-focused performance management. They created space to consider how this research could then inform practice. Evidence-informed risk-taking and experimentation (for example, in trying out new teaching techniques) was encouraged.

Content analysis indicated that Teaching Schools were more engaged with research evidence than other schools, and this engagement was increasing over time. There was little evidence from the *interview data* of increased engagement with and use of research over the relatively short time period of the study, which was perhaps to be expected as the most engaged schools noted that strong engagement with research required long term strategic commitment. However, it is worth noting that Teaching Schools, overall, appeared - from the *content analysis of school websites* (see main report for detail) - to be more strongly engaged with research, and this was increasing over time. This contrasted with analysis of websites of other schools, in which they were less research-engaged and the picture was static.

National level

KEY FINDING: Senior school leaders felt government policy needed to be strongly aligned with research evidence.

At a policy level, other policy organisations were judged to have stronger messaging than DfE. DfE documents promoting research use for school improvement focused on awareness of research and how to use evidence in school improvement. Other policy organisations (including EEF and NFER) produced more outputs in this area, according to the content analysis. The qualitative research indicated that teachers and school leaders were more likely to look towards the specialist organisations and academics rather than the DfE or its agencies.

Government policy was seen to be more aligned with research evidence than in the past, but school leaders felt this needed to be improved especially in relation to accountability drivers. There was some evidence from the qualitative research that some

teachers and school leaders see current government policy as more evidence-based than in the past, although there was also contradictory evidence on this. The need to implement new government policies and meet the accountability requirements placed on schools was high in the minds of school leaders and teachers, leaving little time for research engagement or use in many cases. Highly research-engaged leaders felt that that if these requirements were clearly aligned with research evidence then that would alleviate this problem and allow them to meet such requirements whilst ensuring practice is evidence-informed.

Concluding messages

KEY MESSAGE: School leaders' support for engagement with research is the most important driver. Whether schools are completely disengaged or highly engaged with research evidence, school leaders can make positive changes to increase engagement.

Whilst some schools are strongly engaged, many are not, and this study suggests that attention needs to be paid to each part of the school and wider education system, including research quality and accessibility; school processes, cultures and leadership; teachers' skills, motivations and knowledge; and the wider policy environment. The importance of the role of school leaders as crucial drivers of change was a central message of the study.

To facilitate system change, attention needs be paid to each of these aspects of the system. To do so, we suggest that fruitful areas that DfE should consider are:

- Support continued relevant research into effective evidence-informed practice.
- Consider ways of building on Teaching School leadership of evidence-informed practice in the system.
- Encourage senior school leaders to support evidence-informed teaching.
- Find ways to strengthen school-university partnerships, including in relation to Initial Teacher Training.
- Aim to embed research evidence in the professional discourse and practice of teaching.
- Aim to align policy changes with the best research evidence available.

1.   Introduction

1.1 Evaluation aims

This evaluation was commissioned by the Department for Education (DfE) in August 2014 to **make an assessment of *progress* towards a system within which the teaching profession improves practice through the rigorous use of robust evidence**.

To do so, the study had an initial set of sub-aims for the evaluation which fed into this main aim:

  a) To provide an ongoing 'continually updated' evidence review, that drew together major external research and findings from recent pilot years as well as further activities as they developed during the course of the evaluation looking at Evidence-Based Teaching (EBT) in schools.
  b) To identify gaps in evidence via the live evidence review.
  c) To understand the meaning/interpretation of EBT on the ground.
  d) To understand the extent to which EBT was engaged with by DfE partner organisations.
  e) To monitor internal alignment of department policies and to inform the DfE's thinking on effective policy interventions to support EBT.

The DfE's definition of evidence-based teaching, as set out in the tender document for this review, was used as the basis for the evaluation:

> *All teaching practice reflects both individual teaching expertise and the best and most up-to-date external evidence from systematic research.*

The project team developed a more detailed definition of 'evidence', clarifying that this referred to forms of research evidence (for use as a prompt in the qualitative interviews, for example):

> *We use the term 'evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews such as those produced by the Sutton Trust, EEF and John Hattie; external evaluations; and/or research produced by teachers/schools that is underpinned by rigorous and systematic enquiry.*

The DfE's tender document went on to state:

> *The ultimate test would be whether teachers could explain their choices and practice by referring to a robust evidence base and using logical argument and reasoning, rather than saying that they do it because Ofsted or the department has told them to. Within this, though, there must be appetite for innovation in order to further develop practice. Rather than this*

being unfettered development, innovation must be 'disciplined' in that it would build on existing knowledge of what works and why.

This rationale was based on a series of core assumptions about EBT by the DfE:

- The EBT policy approach assumes that EBT ultimately has a positive impact on pupil outcomes.
- The EBT policy approach assumes that EBT helps and supports school and teacher autonomy.
- The EBT model is not predicated on centralist command and control.
- EBT will be an important tool for helping the profession become increasingly 'self-improving'.
- EBT will mean that the teaching profession will look less to the department and Ofsted for advice, and more towards the evidence and itself.

The department characterised its own actions aimed at developing EBT in terms of 'an ongoing commitment to promote the use of evidence through encouraging incremental change in schools', for example:

- Working with an independent expert group to develop and publish a Standard for Teachers' Professional Development, which has the importance of relevant evidence at its core[2].
- Supporting the emerging Chartered College of Teaching in its work around improving access to relevant and usable evidence for teachers.
- Continuing to fund the Education Endowment Foundation as it expands its remit to focus on evidence in teaching more widely.
- A commitment in the White Paper, *Educational Excellence Everywhere*[3] to help incentivise researchers (and the funders of research) to produce research that can improve practice.
- The Teaching and Leadership Innovation Fund – launched in 2016 to enable what the department described as new, high-quality and high-impact CPD provision to be delivered where it is needed most, helping to extend the evidence base.

1.2 Evaluation approach and questions

The evaluation involved three approaches to data gathering:

- An ongoing, continually updated evidence review including two strands: a review of key literature in the field around use of research evidence in teaching (included at

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[2] DfE (2016a) Standard for Teachers' Professional Development
[3] DfE (2016b) Educational Excellence Everywhere

Appendix 1), and interviews with leaders of current projects aimed at developing aspects of EBT in England.

- An analysis of the contents of policy documents, school websites and social media outputs.
- Case studies of 15 schools carried out over two years, as well as interviews with leaders from a further seven schools carried out in the second year of the project.

The study design was also informed in the early stages by an initial DfE logic model for evidence-based teaching.

This report sets out findings from this two-year project, structured around the following research questions:

1. What do we know about effective use of research evidence?
2. To what extent are schools and teachers aware of, engaged with and/or using evidence to improve practice, and in what ways?
3. What are the key influences on the awareness, engagement and use of research evidence by schools and teachers?
4. How consistent are the messages on evidence-informed teaching that come from government and wider influencers?

It should be noted here that whilst the term 'evidence-based teaching' was used at the start of the project, much of the research examined as part of the evidence review, and comments from interviewees, indicated that the term 'evidence-informed' teaching was preferable to 'evidence-based'. This term indicates that teaching, as a complex, situated professional practice, draws on a range of evidence and professional judgment, rather than being based on a particular form of evidence. Therefore, from this point on, we use the term evidence-informed teaching, or EIT. In the remainder of the report, schools and teachers are referred to as more or less 'research-engaged' depending on the extent to which they support and undertake evidence-informed teaching.

2. Methods and methodology

2.1 Evidence Review

The continually updated evidence review involved two strands: a review of key literature in the field, primarily drawing on existing reviews, and interviews with leaders of current projects that were all aimed at developing aspects of EIT in England. The evidence review aimed to fulfil a number of functions:

- Gather sources of evidence to establish an initial 'baseline'.
- Identify gaps in this evidence base.
- Inform the development of the development matrix.
- Feed into the content analysis and qualitative strands.

The initial evidence review itself was completed in December 2014 and was updated with more recent studies in 2016. A summary of the key findings is listed in Section 3 below, with the full review included as Appendix 1.

In consultation with DfE, the research team also identified a number of current EIT projects so that we could interview key individuals about the progress of these ongoing projects, with the aim of developing understanding of what contributes to impact on teaching and learning. Interviews with seven leaders of ongoing projects were conducted between May and July 2015.

2.2 Content Analysis

A content analysis was conducted of three sources: policy documents, school websites and social media outputs. It is important to note that content analysis can only provide an indicator of practices and policy, since it relies on information in the public domain rather than interrogating or observing practices. Nevertheless, it provides an unobtrusive way of gathering data from a large number of sources. Additionally, it allows for comparison to reveal difference, for example between policy makers; between school types; and between schools over time.

2.2.1 Policy documents

A purposive sample of policy documents and press releases was selected from a range of educational agencies and organisations for analysis in Year 1 of the study.

Policy documents/press releases were identified through a combination of hand searching and recommendation. Dates for inclusion for documents ranged from the 2010 White Paper (Department for Education, 2010) to February 2015. The final selection of documents was approved by both the research team and DfE colleagues.

In total, 75 documents were examined during this phase of the work. After their identification, documents were initially categorised by type of organisation (DfE, other government, non-government); type of document (report, strategy document, guidance etc.) and purpose. As part of phase one, we also considered the Carter Review of Initial Teacher Training[4] Evidence Gathering: Paper 3 (Summary Report of Findings from Review of Course Materials).

The documents were then analysed individually using a proforma and rated 'high', 'medium' or 'low' (or not at all) against a number of criteria, including:

- Whether documents promoted awareness of what evidence comprises.
- Their messaging in relation to quality of evidence that teachers might engage with.
- Whether documents promoted engagement – i.e. why evidence should be used.
- Whether documents promoted how evidence should/could be used in practice development.
- Their messaging in relation to how impact of evidence use might be assessed.
- Their messaging in relation to getting the right people involved in the EBT endeavour.
- Building capacity – how documents discussed making research use a practical reality.
- Their promotion of a coherent evidence use strategy: specifically their view on the role of government and local solutions in light of the self-improving school system.
- Whether documents discussed strategies for effectively disseminating research.

2.2.2 School documents

A sample of school documents drawn from public websites was analysed in both years of the project, in order to give a picture of whether or not the sampled schools were becoming more research- and evidence-engaged over time.

The schools included:

- All funded Teaching Schools from cohort one[5] (n=65) 'topped up' with the sample from cohort two (n=36) to maximise the length of time schools had had to become 'evidence-informed'.
- A random sample of 100 schools, drawn from all primary, middle (deemed secondary and so linked to secondary), secondary and all through schools included in Edubase (in February 2015) giving a total of 20,127 schools (for the purposes of stratification we also combined all through with secondary). The

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[4] Carter, A (2015) Review of Initial Teacher Training
[5] Cohort one Teaching Schools were designated and began work in 2011. Cohort two Teaching Schools were designated and began work in 2012.

sample was first stratified by phase, giving 16 secondary schools and 84 primary schools, and then within phase by level of eligibility for free school meals.

Website content and school documents that could be accessed via the selected schools' websites were then analysed using the content analysis proforma and rated 'high', 'medium' or 'low' (or not at all) against a number of criteria, including:

- Evidence that the school/Teaching School Alliance (TSA) is trying to promote the use of research or evidence by teachers.
- Evidence that the school/Teaching School Alliance recognises the value of quality evidence or indicates it is engaged with quality evidence.
- Evidence that the school/Teaching School Alliance promotes why research should be used – for example its benefits or applications.
- Whether the school/Teaching school alliance promotes how evidence should/could be used – examples of activity.
- Evidence that the school/Teaching School Alliance promotes evaluation – how impact of use is assessed.

2.2.3 Social media analysis

The third strand of the content analysis – undertaken in the first year of the project only - attempted an innovative approach to analysing the extent to which EIT was promoted or undertaken via social media. This considered both Twitter and the wider spectrum of social media outlets including blogs. Analysis of social media is an emerging field of research and there are difficulties in categorising some content, but it was considered valuable to undertake an analysis of EIT featuring in social media since it is clear that many teachers and school leaders are using social media to support their professional learning and to access research-related content.

Beginning with Twitter, this typically operates with individuals (employing a username beginning with '@') and marking messages with a subject (denominated by a '#'). We therefore began our analysis by seeking out potential @s and #s that might represent UK-based Twitter users in this area and what they might be saying (achieved by pooling personal Twitter follow lists and canvassing colleagues within UCL IOE and SHU). These were analysed using Twitonomy (twitonomy.com) to examine the tweets tweeted by these prominent individuals' @s over a six-week period (24 March 2015 to 8 May 2015).

The team then analysed research-related tweets themed by their hashtags. Potential hashtags were identified by canvassing the research team as well as a prominent blogger in this area (Dr Gary Jones). A list of potential hashtags was also provided by Sara Stafford and Tom Sherrington in their article 'Why middle leaders should become research-engaged to lead change'. A final list of eight hashtags was selected for analysis over periods ranging from three to eight days in late April and early May 2015.

Finally, we used Social Mention (socialmention.com) to look beyond Twitter, in particular to include blogs. Social Mention 'aggregates user generated content […] into a single stream of information' and categorises this content using pre-determined headings to provide an overall picture.

2.3 Qualitative strand

The qualitative strand comprised three elements:

- 15 longitudinal school case studies with the first round of data collection between March and June 2015 and the second round between April and July 2016. Data collection was undertaken through telephone interviews.
- Telephone interviews with senior leaders and teachers in five schools identified as highly engaged in evidence-informed teaching, conducted between May and July 2016.
- Telephone interviews with senior leaders in three counter-factual schools that had previously been highly engaged in evidence-informed practice but had not made clear progress in terms of student and/or Ofsted outcomes. These interviews were conducted in June and July 2016.

The tools used in these interviews are available at Appendix 3. Summary details of data collected via the 97 interviews in 23 schools as part of the qualitative strand are included in Table 2-1 below:

Table 2-1: Qualitative interviews - achieved sample

Year	Source	No. of schools	No. of head teachers/ senior leaders	No. of teachers	No. of middle leaders	No. of EIP or CPD leads
2015	case studies	15	15	15	15	N-
2016	case studies	14	12	14	-	11[6]
2016	highly engaged	5	5	5	-	-1
2016	counter-factual	3	4	-	-	-
	TOTAL	**23 total [15 in Y1, 22 in Y2]**	**36**	34	**15**	**12**

2.3.1 Case studies

The case study sample was designed to provide variation in engagement with, and use of, evidence. Furthermore, it sought to provide variation in school phase, type, location and engagement and non-engagement in formal networks such as Teaching School Alliances and Multi-Academy Trusts. The achieved sample of schools included one infant, one junior, six primary, one all through, one special, four secondary schools and one sixth form college. A breakdown of key characteristics for each participating school is included below in Table 2-2. Generally speaking, the schools coded with letters closer to the start of the alphabet were categorised as having greater levels of engagement with research evidence.

Table 2-2: Characteristics of the 15 case study schools

School Code	School phase	School type (self - declared)	Number on roll	KS2	KS4*	FSM	Most recent Ofsted rating
A1	Primary	Community	Highest Quintile	94%		27%	Outstanding
A2	Primary	Voluntary aided school	Highest	80%		23%	Good
B1	Secondary	Academy	3rd quintile		74%	10%	Good

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[6] Please note that the head teacher was also sometimes the EIP therefore the overall number of interviewees stated is lower than the number of interviews.

School Code	School phase	School type (self-declared)	Number on roll	KS2	KS4*	FSM	Most recent Ofsted rating
B2	Special	Community	Lowest		No school data	65%	Good
B3	Secondary/ Sixth form	Community	Highest		72%	42%	Good
C1	Infant	Foundation	4th quintile	No data		7%	Outstanding
C2	Primary	Community	Highest		100%	76%	Good
D1	Primary	Community	Lowest	79%		13%	Good
E1	Junior	Community	2nd quintile	85%		159%	Good
E2	Secondary	Academy	3rd quintile		71%	17%	Good
E3	All through	Voluntary aided school	Highest	85%		24%	Good
F1	Secondary	Community	Highest		67%	32%	Outstanding
F2	Primary	Voluntary aided school	3rd quintile		100%	10%	Good
G1	Secondary	Academy	4th quintile		99%	3%	Outstanding
G2	Primary	Community	4th quintile	97%		5%	Good

The data presented is sourced from the https://www.compare-school-performance.service.gov.uk/ website and is based on the 2014 to 2015 academic year. The Number on roll data is sourced from the Ofsted school data dashboard (based on 2013/14 data in order to protect school anonymity and to give an indication of relative size in relation to phase).

Data were collected from a range of interviewees as indicated in Table 2-1 above. All interviews were transcribed. Following a preliminary round of coding of 12 interviews, the consistency of coding within the team was reviewed and the analytical framework revised to take account of themes emerging from the data. All interviews were then coded using the revised framework and analysis undertaken by case and by role.

2.3.2 Highly research-engaged schools

Five highly-engaged schools were added to the study in 2016 to provide deeper insights into school and teacher practices in highly-engaged schools, the relationship between research engagement and school improvement and the factors that had supported them to embed high levels of engagement. The sample of schools was created by a process consisting of:

- A request to project team members and their colleagues at UCL, IOE and SHU to complete a proforma, to identify schools that were highly-engaged.

- This request led to 17 schools being put forward for suggestion.

- From this list, the agreement of five schools was secured to be included in the sample, ensuring that a spread of geography and phase was represented.

- As an additional quality check, every head teacher who was approached checked through the proforma to ensure the assumptions about high engagement were correct.

- As indicated in Table 2-1, semi-structured telephone interviews were conducted with five head teachers, five teachers and one R&D lead.

2.3.3 Counter-factual schools

In the second year of the evaluation it was decided to interview leaders from three schools that appeared to be highly EIT-engaged but that had not made clear progress in terms of student and/or Ofsted outcomes. The aim in undertaking these additional interviews was to act as a 'counter-factual' to help understand the circumstances under which schools that were engaged with research evidence did not see positive outcomes, by exploring the leaders' perceptions of EIT and the ways in which it had contributed to the school's improvement journey.

The sample of counter-factual schools was identified in a similar manner to the highly-engaged schools described above:

- Team members and colleagues at UCL IOE and SHU completed a proforma, using criteria to identify schools that were highly engaged with research but where student and/or Ofsted outcomes had remained static or dropped in recent years.

- From this list, three schools (two secondary and one primary) were selected to reflect a spread of geography and phase.

- Semi-structured telephone interviews were undertaken with current and/or former members of staff from each school:
    - CF1 – Former Deputy Head and current Head of School.
    - CF2 – former Deputy Head.
    - CF3 – Headteacher and Head of Teaching School.

The interviews were used to write short vignettes for each school which were drawn on to inform this report.

3. Findings

In the rest of the report, findings are organised by the key research questions, drawing on methods as indicated in Table 3-1. Each subsection begins with a summary of findings and then presents analysis from different data strands.

Table 3-1: Mapping research questions to methods used

	Evidence Review	Content Analysis	Qualitative strand
What do we know about effective use of research evidence?	all aspects		highly engaged schools
To what extent are schools and teachers aware of, engaged with and/or using evidence to improve practice, and in what ways?		School websites	all aspects
What are the key influences on the awareness, engagement and use of EIT by schools and teachers?			all aspects
How consistent are the messages on evidence-based teaching that come from government and wider influencers?		Policy documents Social media	School leader interviews

3.1 What do we know about effective use of research evidence?

Summary

- Evidence is a contested term and the relationship between research and practice is complex.
- Evidence can be used in many different ways, from direct implementation to less directed 'research-inspired' behaviours.
- The research-practice relationship is not one-way, highlighting the importance of developing relationships between knowledge producers and users (via organisations and individuals bridging these links, such as universities and some system and school leaders) and the merging of boundaries between these two.
- There are few studies into how evidence-informed approaches can impact on schools, teachers and pupils. This indicates the potential importance of the current study, and others like it, in helping build understanding of evidence-informed practice within school contexts.

- In this study, evidence is defined as quantitative and qualitative research findings generated by external researchers; evidence reviews - such as those produced by the Sutton Trust, EEF and John Hattie; external evaluations; and/or research produced by teachers/schools that is underpinned by rigorous and systematic enquiry.
- In more highly-engaged schools:
  - Evidence use was an integral part of school improvement and not an 'add-on'. External research evidence was highly valued and synthesised with other evidence, such as data and/or professional experience, to inform school and teacher practice as part of an ethos of continual improvement and reflection.
  - Senior leaders were largely responsible for building awareness of research evidence, filtering and presenting evidence often via CPD. They performed this function partly because they sometimes felt teachers lacked the skills to judge the robustness of evidence.
  - Engaging with research evidence was a collaborative process, integrated into CPD activity and planning meetings over a sustained period of time, involving senior leaders and research leaders using external critical friends to provide challenge.
  - While external research evidence often challenged teachers' beliefs, it only led to sustained change where there was time for informed debate and teachers could see the impact in practice.
  - Research evidence was used to underpin school leaders' decision-making, for example their approach to CPD, as well as pedagogical decision-making at a classroom level. Use of research evidence to support teaching and learning occurred at the whole-school level, within teams and at an individual level.
  - Using research evidence was an ongoing iterative process of implementing new, or changing existing, practices and assessing impact. The importance of discussing impact findings with others was highlighted across most of the schools.
  - The alignment of CPD, performance management and evidence-informed teaching was seen to be crucial; embedding research evidence took time and required consistent, strategic direction from school leaders.

3.1.1 Evidence review

The initial scoping review of the evidence review strand provided a starting point for the study. Headline findings are summarised here by way of introduction to the wider project findings, and the full review is included at Appendix 1.

Evidence is a contested term and the relationship between research and practice is complex. Clarity is therefore needed in understanding what people mean by the terms

involved. This relates in particular to the nature of the evidence and the kinds of research which support evidence use by teachers.

Evidence can be used in very different ways. This ranges from:

- Seeking to replicate faithfully the behaviours or practices which were shown to be causally linked with improved outcomes, through
- More interpretive re-application of research-based principles and practices seeking to achieve the intended outcomes from previous research, to
- Broader, more creative research-inspired approaches.

The research-practice divide has traditionally been seen as a unidirectional model, with evidence flowing from research to practice. More recent work has identified the importance of seeing this as a reciprocal relationship with research questions arising from practice and research knowledge being developed in professional contexts, as well as research being able to inform practice-driven concerns. Research brokerage therefore remains an important challenge, as identifying specific and robust research which might address the needs of a particular school, teacher or pupil is challenging, even for experts in the research community. **This highlights the importance of research with a practice and professional focus, which includes an organisational dimension.**

The available research about the impact of evidence-based teaching is still limited and relies mainly on descriptive accounts and opinions, often about evidence use in optimal circumstances. Caution is therefore needed in interpreting this information in terms of wider uptake. There are only a few studies which have sought to link evidence use with changes in teachers' practice and fewer still which robustly establish a link between evidence use and improved outcomes for learners in an organisational setting. We therefore still know relatively little about the *effects* of evidence-based approaches on schools, teachers and pupils, and how to increase the likelihood of better outcomes for learners in particular. This indicates the potential importance of the current study, and others like it, in helping build understanding of evidence-informed practice within school contexts.

However, the knowledge base about teachers' awareness, engagement and use of research is developing rapidly, in a similar way to other professional fields. This knowledge base also draws on research about evidence-informed decision-making in other fields, particularly medicine and health-related professions, but also increasingly in education. Wider social science knowledge about organisational and individual behavioural change could usefully inform approaches in education in so far as educational practice aims to change behaviour, and takes place in organisational settings. **This highlights the importance of relationships and processes.**

In terms of current research in education, there is a tension between research which aims to demonstrate a causal link (such as through controlled trials of evidence use), but

which inevitably simplifies the complexity of interpreting and applying evidence from one educational context to another, and research which aims to find general approaches for improvement. In practice, research is rarely 'applied' in a linear way by teachers or schools: research implications are unlikely to be clear-cut and must be contextualised and combined with practice-based knowledge as part of a wider professional learning process. There is no consistent logic model or theory of the way or ways in which evidence-based practice might lead to more effective teaching and learning. Some assumptions about the likelihood of benefit may limit the applicability of findings from current studies. For example, benefits may be seen for some very specific groups of learners such as very young children or those struggling in a particular subject. Also, there will be differential benefits from using evidence-informed practices for different teachers and schools: the more effective a teacher or school, the less likely that 'average' gains will help to bring about improvement. This limits how effective evidence use is likely to be and argues for an expertise model of evidence use to improve informed decision-making by practitioners. **This highlights the importance of a research focus in developing evidence-based teaching.**

Strategies and structures to support the development of evidence-informed teaching need to be multi-dimensional and are likely to include features related to:

1. The nature of the research and evidence itself (its quality and wider applicability);
2. Effective communication processes (such as mediation by organisations like EEF, or translation by senior leaders) whilst taking into account variation in teachers' needs, experience and skills (relating to integrating research into practice); as well as
3. The characteristics of the school contexts in which they work (with some schools more supportive of use of research evidence) so as to increase the probability of benefit from evidence for improved outcomes for learners. This highlights the importance of understanding the wider context, which is often implicit or even hidden in the existing reviews, which seek to identify common features and patterns across contexts.

This review highlights that the messages, actions/requirements and evidence provided by government, other agencies and researchers themselves will all influence thinking and practice among schools and practitioners. Similarly, the cultures, norms and capacity of schools and the professional experience and skills of individual teachers will also be important factors.

3.1.2 Highly research evidence-engaged schools

This section draws on the findings from interviews with leaders and teachers in the sample of six highly research-engaged schools undertaken in Year 2 of the study (see Section2.3.2). Our analysis identified many similarities amongst these schools. These spanned their orientation towards EIT and awareness, engagement and use of evidence,

as well as the organisational cultures, structures and processes that enabled and support EIT.

Orientation towards EIT

Across all the interviews of head teachers in the highly research-engaged schools there was a shared view that EIT comprises three interwoven elements underpinned throughout by a reflective approach:

- Looking outwards to external research.
- Using in-school data in various forms (for example, observations of teaching and learning as well as progress/attainment data) and professional experience to identify the 'problem', consider the relevance of research evidence in relation to context and adapt research evidence to context.
- Evaluation or research into the impact of practice changes made in response to research evidence on outcomes for pupils.

As one head teacher explained:

> **Definition of evidence-informed teaching**
>
> '**evidence-informed teaching is** about looking and surveying good, robust external evidence, comparing, judging, applying that with your past experience, with your present experience and trying to marry the two with some good judgment. ….[it] is about being supported, challenged by external evidence, testing it, being a better evaluator of your own practice and being more reflective' (Head teacher)

As the quote above illustrates, and was evident across all the head teacher interviews, the role of external research was to inform, not determine, decisions about practice. This aligns with recent research into the research-practice relationship summarised in 3.1.1 above. Two of the head teachers felt particularly strongly that 'evidence-based practice' was not an appropriate term and represented a less mature position than evidence- or research-informed teaching.

> **Using research to *inform* practice**
>
> '**we prefer to call ourselves research-informed** …Quite a lot of other schools we work in I don't think appreciate that difference. We find that quite subtle and very important. Some of our partner schools …. do things just because it says in research but we go well that isn't necessarily applicable to your context and you can begin to see cracks ' (Head teacher)

Broadly, the teachers in the highly-engaged schools held similar views to their head teachers on the nature of EIT and the role of research evidence. All the teachers agreed with their head teachers about the crucial importance of using research evidence to inform teaching, although both teachers and head teachers moderated this with the proviso that this was subject to critical engagement with the evidence and reflection on relevance to the school context.

The ways in which these orientations to EIT are manifested in the highly research-engaged schools are set out below.

Awareness of evidence

Awareness, in our research, was defined as:

- Understanding what research evidence is.

- Knowing how to access research evidence.

- Being able to judge how robust research evidence is.

- Knowing that research evidence can help improve practice and how it does that.

- Knowing how to go about being 'evidence-informed'.

In highly research-engaged schools, knowledge, skills and capacity in relation to awareness of research evidence were primarily vested in the senior leadership team and in those charged with leading research use in the school at senior or middle leader level where they had been appointed. Across the schools, these staff drew particularly on meta-analyses - with John Hattie's Visible Learning texts (Hattie, 2009, 2011)[7] and the EEF Teaching and Learning Toolkit (undated)[8] referred to by nearly all interviewees, as well as other reviews and Sutton Trust publications[9]. All schools referred to the work of academics, such as Dylan Wiliam, Carole Dweck, Rob Coe and Robin Alexander. In one school, extensive use was made of the Cambridge Primary Review evidence (Alexander and Armstrong, 2010). A wider range of sources were accessed depending on the specific area of research use, for example mathematics teaching. These included individual and cross-school case studies in the area of interest, books and journal articles.

A notable feature of all the highly research-engaged schools was the direct connections between the head teachers and leading academics, which included Dylan Wiliam, Robin Alexander and Rob Coe. All the schools also had direct research links with their local universities, for example, one school worked with a coach from their local HEI who

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[7] see the Visible Learning website
[8] see the EEF Teaching and Learning Toolkit
[9] see the Sutton Trust website

sourced research evidence to support teachers' engagement in lesson study. Senior leaders also found out about research through attending conferences where academics presented their work, as well as through a strong network of professional contacts, including other school leaders - *'it's about being outward facing and going out and looking for it and knowing who to ask*' (Headteacher). The highly research-engaged school leaders and research leaders also drew on social media, radio and television for links to evidence sources and some used social media as a means of sharing evidence.

In most instances, evidence searching and collation was focused on a small number of key whole-school and/or departmental priorities. In addition, in one school, the research director collated evidence across a wide range of pedagogical topics that were likely to be of use to teachers.

Senior leaders and research leaders filtered research evidence - presenting it to teachers in summaries, digests or research briefs (four schools) and via CPD sessions (all schools). In two schools, evidence was also disseminated through voluntary journal clubs or enquiry groups. In most instances, summarised information provided links to the evidence source so that teachers had the option to access the information, and either staff room libraries or the personal libraries of senior leaders were made available to teachers. Two head teachers drew attention to the need to keep repeating evidence messages.

> **School leaders filtering research evidence**
>
> 'There are publications and websites and sometimes hard copies of things that are flagged up in staff meetings and people are obviously at liberty to pursue those when they can. But I think it would be fair to say that **the leadership team generally would be doing a lot of that filtering. They would say 'these are things that we consider to be important'**. But it doesn't always happen that way. Various people bring to the table research or evidence that they've come across and that helps inform things.' (Head teacher)

Senior leaders reported that there was **variation across their schools in teachers' awareness of evidence**. Although in some of the schools there was encouragement for teachers to directly source and access evidence, senior leaders recognised that they had very limited time to do so. The highly research-engaged schools' teacher interviews reflected the varied awareness of evidence - ranging from a teacher who considered that they had very limited awareness, to a teacher who felt knowledgeable about how to access and use research. In one school, all the teachers undertake a Masters degree in education, which the teacher interviewed attributed to supporting their awareness of research, and there was a particularly strong emphasis on providing links to evidence sources in research summaries - '*we are layering in references all of the time*' (Head

teacher). Teachers often perceived their senior leaders and, where they were in place, research leads, as the 'go to person' to access evidence.

Senior leaders in some of the schools felt that **teachers lacked the skills to judge the robustness of evidence,** a view also held by some of the teachers. Judging quantitative studies was perceived to be particularly problematic. The deputy head in one school planned to work with their local HEI to develop capacity, while the head teacher in another relied on the research lead to filter evidence for robustness before it reached teachers.

Engagement with evidence

We define engagement with research as thinking that it is important to draw on research evidence to inform and improve practice, and having conversations about the evidence.

Engaging with research evidence in the highly research-engaged schools was a collaborative process, integrated into CPD activity and planning meetings over a sustained period of time. In addition, action research and lesson study were cited as important mechanisms to support engagement in some of the highly research-engaged schools, and some of the teacher interviewees described the ways in which discussion about evidence permeated more informal conversations about practice.

While CPD activities involved all teachers, senior leaders reported variation in the extent to which individual teachers engaged with evidence. Some of the schools ran voluntary enquiry groups or journal clubs for teachers who wanted to engage more deeply with the evidence. Within the highly research-engaged schools there was an expectation at all levels that decisions should be evidence-based. In describing changes to their practices, the teachers in highly research-engaged schools were all able to identify the research evidence that informed the change and articulate why they thought the change would lead to positive outcomes. However, they did not necessarily have in-depth knowledge of the evidence base, and the descriptions of conversations about evidence that teachers recounted generally focused on pedagogical issues related to implementation rather than interrogation of the research itself.

> **Teachers' focus on implementing rather than interrogating research evidence**
>
> 'I think we have taken it as read that getting children to think about their learning is valuable because we're told the evidence says that and most of our talk is focused on how we do it, the actual practicalities of getting children to talk about how they learn and what their next steps are and how they feel about what they're learning and to begin to develop curriculums that encourage thinking …. So I think we're more engaged with 'how do we do it', taking on face value that it's worthwhile doing because we're told that that's what the EEF have found. And we, instinctively teaching it, think that it's valuable. ' (Teacher)

Senior leaders deployed a range of approaches to engage teachers with evidence, spanning formal activity, such as leading CPD and performance management, informal one to one conversations about classroom 'problems' and practices, and 'sowing little seeds of thought about research'.

The use of CPD to stimulate teacher engagement was a key mechanism deployed in all the highly research-engaged schools. The use of Dylan Wiliam's model of teacher learning communities[10] by senior leaders in one school to mediate between evidence sources and implementing practice change is summarised below.

> **Use of Wiliam's model of teacher learning communities to embed research evidence into practice**
>
> 'There is a very strong research base on which formative assessment is based… so the school leadership team have very clearly shared those research findings and outcomes with us. There are all sorts of papers and booklets… which we are very much encouraged to take a look at and be aware of. Also, within the structure of the teacher learning community meetings, every technique that we look at has some form of evidence-based research there to back it up and that might be cited within the materials that we're given or it's discussed within the meeting. So there is a clear communication that the things that we are putting into practice have an evidence base beneath them. That's an important part of the communication between us and the leadership team.' (Teacher)

Reflective cultures, whole-school commitment to improvement and a premise that changes should be evidence-informed underpinned teacher engagement in the highly

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[10] See Dylan Wiliam's website

research-engaged schools. However, as the research director in one of the schools pointed out, **external research evidence often challenges teachers' beliefs and while there may be temporary change, research evidence only leads to sustained change if there is time for informed debate and teachers can see the impact in practice.** Literature on research use often refers to the 'translation' of research evidence for use in practice, however within the highly research-engaged schools the process of engaging with evidence appeared to go beyond 'translation' of the evidence itself, encompassing a more complex process whereby teachers and others are engaged in challenging the evidence and its relevance to their context as well as challenging their own practices and beliefs. This process is illustrated in the description of an enquiry group meeting that was responding to a pastoral leader's analysis of school data that had highlighted the under-attainment of boys on entry and as they progressed through the school. Prior to the meeting, the research director and school research lead had sourced and collated relevant research evidence:

> **Teachers' engagement with research evidence**
>
> 'We had three papers and then a side of A4 that distilled the majority of the research… most people hadn't read the papers but they had read the side of A4... in the group we just discussed was this chiming with our experiences, with our beliefs, where actually was there a bit of us perpetuating some gender stereotypes. We tried to get into the meat of the research… and was our school matching the bigger social picture, and if it was, was there anything we could do about… We talked about what we'd done previously as a school, what had happened in other schools. And we've got a follow up meeting where we're going to talk about next steps.' (Research Director)

Engaging with evidence in all the highly research-engaged schools involved senior leaders and research leaders using external critical friends to provide challenge. Most frequently this involved their network of leading academics or their local university, supplemented by leaders in other schools who had a strong commitment to evidence-informed practice.

Use of evidence

We define use as any activity where research evidence is actively used to investigate and change practice. Awareness, engagement and use of evidence are highly interrelated and the previous section detailing engagement with research has provided some examples of the ways in which the highly research-engaged schools use evidence to investigate practice 'problems'. It is particularly difficult to draw meaningful boundaries between engagement and use.

In the highly research-engaged schools, teachers' engagement in CPD, meetings and more informal conversation was part of an ongoing cycle of engagement and use. The ideas and principles from research discussed in CPD sessions were integrated into teachers' everyday practices. Teachers then formally or informally evaluated the impact on pupils and reflected on this with other teachers in later CPD sessions. It is important to note that interviewees generally did not refer to evidence use as a discrete process of implementing a named evidence-based programme, the exception being the use of Dylan Wiliam's CPD model in one school. Instead, even in the instances where schools were drawing on the principles of an evidence-based programme, their concern was about integrating evidence use into their leadership and teaching practices, adapting to context rather than focusing on fidelity of implementation.

Notably, all the **highly research-engaged schools used research evidence to underpin school leadership decision-making and the design of school activity -** for example, their approach to CPD, as well as pedagogical decision-making at a classroom level. The Research Director in one school noted that using evidence to inform school policy development also supports individual teachers to use evidence.

> **Use of research evidence to inform school policy**
>
> 'as a senior leadership, we're now more in a practice where if we're looking at our homework policy that we survey the best evidence for that, we create a paper with questions and with prompts and we look at the research and then we start to determine our next steps with our new homework policy. So I think it's CPD but it's also decision-making through senior leadership (Research Director)

Use of research evidence to support teaching and learning occurred at the whole-school level, within teams and at an individual level. At the whole-school level the focus was usually on implementing pedagogical strategies that were underpinned by a strong evidence base which could be applied across subjects, for example, strategies related to formative assessment and feedback, meta-cognition, peer coaching and collaborative learning and dialogic talk. **Embedding evidence-informed practices** in these areas **was seen as a long-term process** by the senior leaders, which at the time of the interviews had already spanned several years. Teams and individuals tended to use research evidence that was more directly related to curriculum planning or specific teaching and learning issues that they faced, for example, teaching fractions in one school or developing creativity in another.

The highly research-engaged schools made discerning use of evidence: they did not simply try to implement something because it had an evidence base. Leaders and teachers determined practice changes appropriate to their context through discussion of the evidence. In one school, evidence about setting was used strategically by the head teacher to justify to parents why the school did not set pupils as well as to inform practice change.

Using research evidence was an ongoing iterative process of implementing new, or changing existing, practices and assessing impact. Approaches to assessing impact on pupils varied across the highly research-engaged schools, and the difficulties in doing this meaningfully were mentioned by all the teachers interviewed. Approaches to measuring impact ranged from 'noticing' changes through to systematically capturing baseline and end-point data, and in one school, using comparison to a control group. The **importance of discussing impact findings with others** was highlighted across most of the schools. This took place in a variety of ways, for example, reflection with colleagues in teacher learning groups, discussion with the head teacher as part of the performance management process or with colleagues on a Masters course.

In some of the highly research-engaged schools, teachers were supported to generate evidence to share within their school and beyond through undertaking action research, other forms of research or lesson study. While the head teacher in one school believed that teachers were neither positioned nor had the skills to undertake rigorous research, teachers in this school did engage in disciplined enquiry and were expected to systematically measure impact.

Most of the highly research-engaged schools were leading, or involved in, cross-school evidence-based projects. In addition, some were engaged as participant schools in external research projects led by HEIs and two were leading EEF trials. The benefits of working with other schools in this way were summed up by the head teacher in one of these schools, who explained that it had deepened '*our understanding and our knowledge as a schoo*l' and helped the recruitment and retention of teachers as they '*feel valued and active participants in the process*' and become '*ambassadors for research and evidence*'.

Embedding effective EIT

In all the highly research-engaged schools **evidence use was an integral part of school improvement** and not an 'add-on'. The vignette below provides an example of the ways in which **leadership teams orchestrated and integrated the development of evidence-informed teaching.**

> **Vignette 1: Orchestrating evidence-informed teaching**
>
> 'The leadership team [carried out] an extensive range of observations to observe lower attaining writers and interviewed the child about their experiences… And interviewed the teacher and looked at the progress in their books and talked to the child and the teacher about the progress. So we try and get a very broad picture of what it's like to be a low attaining writer in [the school] and see if there are any common patterns of things that seem to work well for these children and if there are… things that seem to… be barriers to their development we take lots of external research findings from universities

or whatever it is and then we also just look very deeply at our data – is it particular parts of the school? - is it certain types of child?

We present that all to the school and they're given time via INSET days and things like this to look at all those findings and begin to discuss within their year group what that says about what's happening in their year group [Then they] come up with priorities for themselves within their year group. So they'll say 'for us, what really resonates is this lack of resilience, they're not sticking with their writing and they'll give up very easily and maybe there's difficulties around handwriting'. So that will be their focus.

They'll come up with a question and they'll try and come up with some possible solutions, what could overcome these barriers and then they'll plan their research. That will involve them writing out quite a detailed plan which involves establishing what their base line evidence is, where the children are at the moment, and then what range of activities they're going to carry out, how they're going to measure the impact of those activities. They'll spend a lot of time with the leadership team looking at the question itself, making sure that it is a good question. They'll spend a lot of time looking at their preferred activities and evidence and making sure that it is robust.

They will then begin to carry out that research within their classrooms. It might involve them going into each other's classrooms and doing some observations of each other, conferencing, book sampling. And then after about four or five weeks… they'll come back together with the leadership team and we'll do some challenging conversations around what they've found out so far. Then they'll go back into the research again, maybe on a different tack perhaps depending on the findings, or they might continue to dig deeper.

Then after about eight weeks we'll draw it all to a close. Every year group within the school is working on something to do with writing which they feel is relevant to their particular year group and then we have a large presentation where they all present their research, the evidence that they've come up with for it and that is critically evaluated by their colleagues as part of this presentation. Then at the end of it we take all these findings and as the leadership team we look at what we think is strong as evidence and what is appropriate maybe for certain year groups, what is appropriate for the whole school, what's appropriate for any particular groups of children, and that becomes part of our improvement plan for the following year.' (Head teacher)

School improvement in the highly-engaged schools was underpinned by an ethos of continual improvement and reflection:

> **Ethos of continual improvement and reflection**
>
> 'For a teacher what is wonderful is the reflective stuff. Whatever they do, they do in a very reflective way, and they don't rest on their laurels they're always thinking: 'well, actually how can I make that work better?'. It creates a very restless school and it creates a very messy school sometimes, but what it does do is create a school which is constantly evolving and evolving with its own momentum, it's not waiting for somebody to come out from outside, it's just naturally evolving because of the way that teachers see the learning and see the teaching and see their role within that.' (Headteacher)

Leaders and teachers in the highly research-engaged schools' sample stressed the **importance of using CPD and performance management to embed evidence-informed teaching.** There were striking similarities in the principles and ethos that underpinned the highly research-engaged schools' approaches to CPD and performance management.

Across all the schools, **CPD was research evidence-informed and provided teachers with time to discuss research evidence, analyse what was happening in their classes, develop approaches to try out and discuss what happened when those approaches were implemented.**

Performance management in the highly research-engaged schools had a developmental rather than performance focus, and engaged teachers in evidence-informed practices. Described as a 'continuous dialogue' by the head teacher in one school, performance management was usually supported through short observations focused on the practices that the teacher wanted to improve. As the head teacher in another school explained: '*I just ask a single question: how can I observe you in a way that will best help you improve your teaching?*'. **Risk-taking was encouraged**, with targets often focusing on the process of developing practice rather than pupil attainment.

> **Supporting risk-taking**
>
> 'So you might have a target or a discussion about raising attainment in, say, boys' engagement in music, and then you might go and find a piece of research to support that and trial it …Even if it's an absolute flop and it doesn't work out at all, you've done the right thing by going to find out about it.' (Head teacher)

The alignment of CPD, performance management and evidence-informed teaching was seen to be crucial, as one head teacher explained:

> **Aligning CPD, performance management and EIT**

'It took a bit of a long time to realise that if you want EIT to become embedded in practice, you couldn't run the two systems…, of performance management in the old judgemental way alongside the EIT. You need to move into a much more... of a dialogue, and much more of an enquiry based approach to their own development, you've got to allow people the space and the time to develop and make mistakes on occasion - you've got to make people feel OK about that and so it's getting the culture right and when you look back and it's so glaringly obvious… that the one thing that was holding us back was the fact that we were trying to run these two different approaches.' (Head teacher)

The quotation below from the research director in another school illustrates an approach to ensuring such coherence as well highlighting the ways in which evidence-informed school policy development supports teaching.

Embedding EIT

'What we're always trying to do is align PM with CPD because we know that's the only real meaningful time you have to [develop evidence-informed teaching]... For CPD we have a whole-school target which is aligned this year for pastoral… and through that whole-school target, that's where we try and leverage good evidence-informed practice… Then we have a departmental target, that's been based on previous performance data of students, historical trends and also future indicators and again informed by evidence. And then the individual target… what we're… developing CPD for next year and we're making that target more of an enquiry question. And we're trying to … tie in CPD with really robust evaluation of student outcomes. So we're trying to constantly align our PM structure with our CPD and make sure they're all directed and evidence-informed and steered. Our policies in terms of our homework, home learning policy, our feedback policy, strategically they're robustly evidence-informed so we know that there'll be a kind of, a bare minimum in terms of expectation that departments implement those, so that gives another kind of structural support. (Research Director)

The approaches to CPD and PM in the highly EIT-engaged schools **empowered teachers to take ownership of their teaching**. Teachers referred to finding EIT 'engaging' and a support for self-directed development, while heads noted that it '*energised teachers*' and '*increased intrinsic motivation*'.

Embedding evidence-informed practice in the highly research-engaged schools required time and consistency:

The need for consistency and time to embed EIT

> 'The most helpful thing in this school has been the consistency of focus that we've had, 'cause these things are hard to do and you have to get better at them. So we've had the same focus and CPD and observations and training on the same topics for several years now and they're all sort of inter-related. and … [we] gradually get better at it and you learn from each other.' (Teacher)

3.2 To what extent are schools and teachers aware of, engaged with and/or using evidence to improve practice, and in what ways?

Summary

- Content analysis of school websites indicates that greater numbers of Teaching Schools were demonstrating a commitment to evidence use on their websites over time, with research evidence typically linked to school improvement and CPD and training activity.
- The vast majority of randomly selected school websites displayed no engagement with research evidence. Furthermore, this picture did not change between years one and two of the study.
- In relation to **awareness** of research evidence, analysis of the qualitative case study sample found that:
  - Schools were aware of and valued different forms of 'evidence', but generally prioritised sources such as attainment/performance data and other schools' experiences above external research evidence.
  - Overall, head teachers expressed a deeper understanding than other respondents, and most staff in all groups felt their understanding hadn't changed over the course of the study.
  - More engaged schools in the wider sample, similarly to the most highly engaged schools, used multiple sources and sophisticated approaches to accessing research, led by the head teacher, and used multiple approaches to making research accessible for their staff.
  - In both years of the study, more research-engaged schools tended to use trusted sources like EEF reports to judge robustness of research, as they felt unsure of how to judge quality.
  - Learning communities and CPD helped build understanding of how evidence could improve practice in some schools.
- In relation to **engagement** with research evidence, case study analysis found that:
  - Orientation towards the importance of research evidence was related strongly to the need for such evidence to be problem- and practice-focused.
  - Teachers were more likely to trust research evidence when it was supported by other evidence. Most teachers were unlikely to be convinced by research evidence on its own: they needed to be able to have this

backed up by observing impact or hearing trusted colleagues discuss how it had improved their practice and outcomes for young people.

- o Where there was a formal expectation for teachers to engage with research, this tended to relate to participation in some form of whole-school practice organised by either a senior leader or research lead.
- o In some of the less research-engaged schools, being under pressure to meet expected attainment and progress targets meant that only research very clearly focused on assessed results would be considered.
- o Orientations of teachers interviewed were on a continuum, from a small number of teachers against the use of research evidence; with others neutral (generally due to lack of time or not seeing the value); towards (for most teachers) being generally able to see the value but needing to be convinced by seeing its use in action; to - in a few cases - those having both access to research and seeing the value of it.
- o In relation to being equipped to use research, most schools/staff felt that they were in the same or similar place in both the first and second years - with most not feeling well-equipped. Slight improvements were identified by some in all staff groups.
- o Conversations about research were typically focused on practice-based problems, and how research evidence might contribute to dealing with them: the phrase 'the evidence shows that…' or questions like 'what does the evidence show?' were common in the most research-engaged schools, but not in other schools.
- In relation to **use** of research evidence, case study analysis found that:
  - o There was limited evidence from this study of teachers directly importing research findings to change their practice.
  - o Rather, research informed their thinking and led - at least in the more engaged schools - to experimenting, testing out and trialling new approaches in more or less systematic ways.

3.2.1 Content Analysis

The **Content Analysis** examined the websites of a selection of Teaching Schools that had received funding for Research and Development (R&D) as well as a random selection of schools over a two-year period. Analysing website content and the key documents included on these sites, such as school and Pupil Premium improvement plans, can provide a strong indication of the values, priorities and ways of working for a particular school or Teaching School Alliance. Of course, some schools and Teaching Schools might value EIT in practice, but not choose to actively highlight that on their website, especially where the site is aimed primarily at a parent and Ofsted audience, rather than other schools. This strand of the content analysis is therefore seen as indicative only and should be read alongside the wider evaluation findings.

In Section 3.2.2 we have included the findings from the content analysis of the websites of the 15 case study schools alongside the detailed qualitative findings, in order to show how they compare with the random sample and Teaching Schools discussed in this section. Teaching Schools and randomly-selected schools were scored 'High, Medium, Low or None' (see Section 2) in each of the five areas assessed in Year 2 of the evaluation. These were:

- Exhibits awareness of research use as part of teaching.
- Recognises the value of quality evidence.
- Promotes why it should be used.
- Promotes how evidence should/could be used.
- Promoting evaluation – how impact of use is assessed.

Detailed analysis is presented in Appendix 2. In summary, a number of overall findings stand out:

As a group, **Teaching Schools score higher in all five areas than the randomly selected group**. In addition, the second year analysis indicates that **greater numbers of Teaching Schools are demonstrating a commitment to evidence use on their websites over time**.

Teaching Schools score relatively highly in terms of key areas including:

- 'Exhibiting awareness of research use as part of teaching' (43% scored high or medium).
- 'Promoting why evidence should be used' (50% - up from 29% in Year 1).
- 'Promoting how evidence should/could be used' (54% scored high or medium).

The documents accessed from the highest scoring Teaching School websites indicate that **EIT is typically linked to school improvement and CPD and training activity**. In exemplar Teaching Schools:

- There was engagement in a significant range of local, national and international projects, including with the EEF, organisations such as the Specialist Schools and Academies Trust and the Education Development Trust, and HEI partners.
- Schools often followed a clearly articulated cycle of research, action and evaluation.
- Specific roles were often allocated to research brokers within schools, and these roles are viewed as central to the school becoming research-engaged.
- Bursaries for research projects were offered in two of the high scoring randomly selected schools.
- There were extensive EIT-related professional learning opportunities for staff.

However, **significant proportions of Teaching Schools (between a third and four-fifths across the five areas) were not promoting or modelling the use of evidence at**

all on their websites. The two areas where Teaching Schools score lowest are 'Recognising the value of quality evidence' (82% None) and 'Promoting evaluation – how impact of use is assessed' (80% None), perhaps suggesting that Teaching Schools may need more support to develop these more challenging aspects of knowledge mobilisation.

The vast majority of randomly selected school websites displayed no engagement with evidence.[11] Furthermore, **this picture did not change between years one and two of the study**.[12] The only area where the randomly selected school websites score slightly higher is 'Promotes how evidence should/could be used', where one in ten websites are scored Medium.

3.2.2 Qualitative findings

Website content analysis for qualitative sample

In the second year of the project, the same website content analysis approach as outlined in the last section for Teaching Schools and a random sample of schools was also applied to the panel of 15 schools interviewed in both years of the study. By comparing this analysis we gain a picture of how far the 15 case study schools can be seen as representative of schools more widely.

Table 3-2 below gives the ratings for the 15 schools. Clearly, with such a small sample, percentages should be read with caution (1 school = c. 7%), but they are used nonetheless to provide a comparison with tables a and c in Appendix 2. The table indicates that the case study schools are closer to the random sample of schools than the Teaching Schools, with only one or two schools scoring higher than Low/None in any given area.

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[11] The highest scoring schools from the random selection are actually Teaching Schools, since these were not excluded from the selection.

[12] The variations in score here should not be regarded as significant. One of the two website assessors changed between Years 1 and 2 of the evaluation, possibly introducing differences in inter-rater reliability despite efforts to mitigate this risk.

Table 3-2: Overall findings for case study schools (%)

Score	Exhibits awareness of research use as part of teaching	Recognises the value of quality evidence	Promotes why it should be used	Promotes how evidence should/could be used	Promoting evaluation – how impact of use is assessed
High	7%	0%	7%	0%	7%
Medium	7%	0%	7%	13%	7%
Low/None	87%	100%	87%	87%	87%
Total	100%	100%	100%	100%	100%

Awareness

In both years of the study, schools were aware of and valued different forms of 'evidence', but **generally prioritised sources such as attainment/performance data and other schools' experiences** as these were seen as most relevant and closest to their context, with external research evidence given comparatively little attention. In the second year, interviews focused more clearly on understanding what **research evidence** was, and there was a range of views within and between staff groups. There were examples of senior and middle leader respondents in less engaged schools stating that they did not understand what EIT means, or saying it was 'tricky' to define or they couldn't define it.

However, the majority of respondents in all categories broadly understood it to be external research, influences and research evidence to inform their classroom practice. At a basic level, for some this was gleaned from general reading to keep up to date with educational developments and using this to reflect on and inform their own practice; for others it was gathering evidence from other colleagues through lesson study, visits and observations from staff in other schools, blogs or using a wider range of student/staff/parent data (i.e. internal data that was external to their own observations) to inform changes to practice.

A smaller number of staff - mainly in the more engaged schools - **identified and differentiated between research that they saw as more robust and valid such as university research, meta-data and tested/proven evidence based on larger scale analysis** with individual studies in journals and magazines that might be contestable/contradictory and less reliable. They acknowledged that this was a starting point or stimulus for important areas to examine in their own school and 'play with it' or apply with caution as context and local needs/differences are critical:

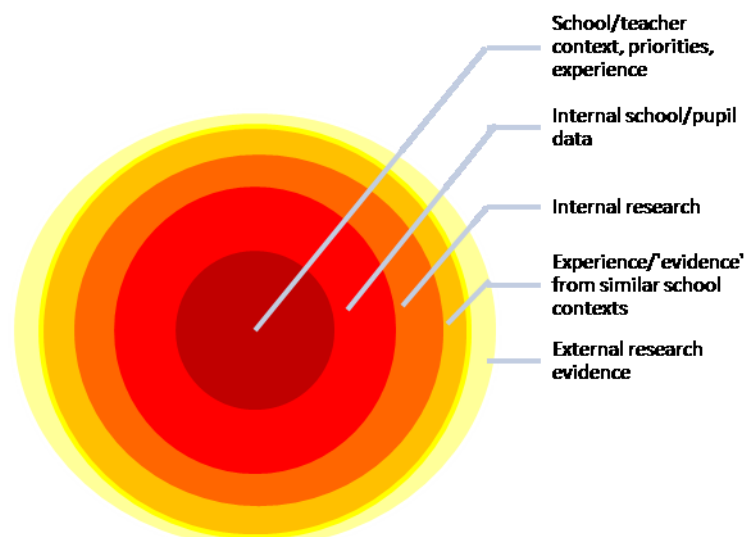> **The need to contextualise research evidence**
>
> 'I mean, we try to do a lot of evidence-based stuff so we use a lot of the John Hattie stuff for the leadership team as a quite good indicator of, you know, methods proven to have worked in other contexts, the Sutton Trust toolkit and so on and just sort of reading around various other case studies…I think it's using a collection of evidence bases because I think research is good because it does pull things together… I think the context bit is always really important, isn't it, that of course whatever it is that you're researching, sharing, whatever, is that would have worked for that researcher in that particular context at that particular time and of course you want to maybe draw on other bits of evidence I think just to really think is this the best thing for our school.' (Head teacher)

There was some acknowledgment that numerical data could make things clearer compared to anecdotal opinions, but also that data can be static and unreliable when pupils/classrooms are complex and changing. There was also some distrust of external evidence from companies/organisations with vested interests and agendas who use research to persuade.

Overall, many on the panel were aware of the whole range of evidence (internal and external) which they consider important - '*all things [can] count as evidence'* - but **some prioritised externally-informed research, others saw experience/observations as more fundamental, and some stressed needing a balance, integrating different sources to inform next steps or change of practice.** In both Year 1 and Year 2, generally head teachers expressed a deeper understanding than CPD leads and teachers, but there were examples where head teachers had a vaguer understanding than some of their staff.

In the first year we suggested that research evidence was, in general, less highly valued than other forms of evidence, as illustrated in Figure 3-1:

Figure 3-1: Perceived relevance/influence of evidence

(red = strong internal relevance, strong influence → yellow = less direct relevance, less direct influence): The relative size and prominence of each 'evidence sphere of influence' varies according to the school's engagement with internal and external research evidence.

In general, most staff felt their understanding hadn't changed over the year. In a few cases, staff reported a deeper understanding through participating in this research project or through more whole-school/CPD initiatives - but broadly speaking the prioritisation identified in Figure 3-1 still applied.

In relation to knowing how to access research, in both years of the study **stronger schools used multiple sources and sophisticated approaches**. This always involved strong leadership from the head teacher. In the more engaged schools, direct work with universities and direct engagement with research findings was used, but always the role of head teacher as intermediary is mentioned by teachers, a clear finding in both years of the study, too. This is often in the form of CPD.

Stronger schools not only had multiple sources but **multiple, active approaches to making research accessible and accessed by staff**. The role of resource libraries built up over time was mentioned by some stronger schools - especially CPD/R leads. Some schools subscribed to digests or organisations providing access to peer-reviewed work e.g. the British Educational Leadership, Management and Administration Society (BELMAS). Local Authorities (LAs) were mentioned as providers of evidence to leaders in some schools.

Schools and teachers mentioned the difficulty of reading evidence directly, but again stronger schools actively aimed to deal with this - in one school there was encouragement to Masters level study; and in another there were talks about moving from solely head teacher access and translation to encouraging staff to access and

interpret for themselves. This cannot be separated from the issue of being able to judge quality, noted below. But there were some examples of developing awareness in the stronger schools, for example one head teacher noted: *'Just more familiarity with it. We're seeing it more. It's being presented more clearly. You know, you hear it more times and so you understand it better.'*

This links to social media which was mentioned by many interviewees, who generally felt it can be positive if coupled with other sources of research and treated with care; teachers and leaders in less engaged schools, however, didn't always show they understood this need for caution.

In terms of being able to judge robustness of research, in both years of the study **stronger schools tended to use trusted sources** like EEF reports and summaries, the Sutton Trust/EEF toolkit, John Hattie's work. Some individuals used their own experience of higher study as a means of helping identify trustworthy work and they explained this was a key strategy, for example:

> **The importance of higher study**
>
> '[Without my doctorate] I think I would have had the enthusiasm for [EIT] but I would have forever doubted whether or not I was qualified actually because I also know that if you're producing evidence then it needs to be valid and the more you learn about it, the more important those things are and actually, you know, working out what you're trying to look for.' (CPD lead)

There were some examples in stronger schools of teachers developing their ability to discern trustworthiness:

> **Vignette 2: developing ability to judge robustness in school A2**
>
> The head teacher felt work was ongoing on enabling staff to critically appraise web-based research: 'I think it's developed but there's still a bit to still work on because I think it's very quick to say you can Google anything and you can get something and I think it's very easy for people to Google, you know, growth mindset and whatever comes up first, print that off 'I've read about growth mindsets', now they may probably well get something from EEF in that case and it may be quite good but they may get someone else's take on it, which actually isn't research about growth mindset, it may be an article about something completely different and I think it's getting people to be… I think it's developing their clarity and choosing 'I'm reading this but now at the end of it, do I think it's robust, was it evidence-based or was it just an interesting article from The Guardian or was it someone who's written about why they don't like something but they've not put any reasoning behind or, you know, what's the rationale of the start point' and I

think it's getting people to get better now at being picky, you know, just because it's the first five things on Google doesn't mean that they're the best five things.' (Head teacher).

This was supported by the teacher interviewee: 'I don't think I could comfortably plough into the internet and see what I could find and know what I was looking at was completely reliable, unless it was something like, 'Oh, I saw the Sutton Trust. I know the Sutton Trust.''

However, as the teacher quotation above illustrates, **many teachers and senior leaders were unsure of how to judge quality** and even those in the more research-engaged schools indicated that as one became more aware of the complexity they became more tentative in their judgments. In less engaged schools and especially amongst teachers, there was a lack of understanding demonstrated, for example: *'I'm – there was definitely some professional articles that had been written by teachers, by researchers, but I couldn't remember what they were, in all honesty, off the top of my head.'* (Teacher).

In relation to understanding how evidence can improve practice, an underlying culture as described below of valuing research was important and sometimes missing in less engaged schools. **Reading research was - put simply - crucial**. But on its own this was not enough: teachers needed to be able to apply research in their own practice, via systematic action research or less formal experimentation. In essence, testing was required and it needed to be practice orientated. A need to reflect prior to and after testing was also referred to in more engaged schools.

As indicated above, direct access was not common. Senior leaders were often translators of research as opposed to expecting teachers to undertake direct reading of research:

Senior leaders as research translators

'I think there is a cultural factor in education because teachers, when they work in a school, they will be very practice-focused and they want to go into the classroom and get on with the job and therefore they often very much look to school policy for their steer, for the expectations for how they do their job and actually a lot of teachers, I think, feel that what they want is confidence that the people who are setting the parameters as to how they should do their job are making due regard to the evidence and not being whimsical in their demands and their policies. I get a sense here that most teachers are happy if they know that there is a strong evidential base at a policy-making level. They don't feel on a personal level that they've got the time or the willingness to engage directly with research-evidence.' (Headteacher)

Learning communities and CPD were used for research awareness in some schools (and were systematic in the more engaged schools). In others, reference was made to accountability pressures driving CPD that was less clearly linked to research, with the example below mixing some research-underpinned reading with other less evidence-informed sources (in this case learning styles):

> **Mixing evidence-informed with less evidence-informed sources**
>
> 'There are perhaps other things. We were talking about the different types of learning – kinaesthetic and auditory and actually they've realised that all students perhaps need to be able to learn in all different ways. Stronger memories are created if we use all of the senses when teaching. I don't know if I appeal to all the senses all the time, so if I was going to put that kind of thing into my teaching that would take a lot more work. I've certainly taken some of the things which I think appeal to me and I thought I was doing it. Or, without too much more difficulty, I can add it to my teaching. Whereas some of the other ones – actually in an average week I wouldn't have the time to think about how to change my teaching to incorporate that.' (Teacher)

Less engaged schools tended towards focusing on official guidance and Ofsted, highlighting the importance of guidance aligning with well-evidenced practices, as indicated in this passage:

> **Aligning official guidance with research evidence**
>
> 'I wish I could do more in terms of really researching the techniques I'm using, ensuring that there is the evidence base behind it. But what I tend to use is techniques that I learned on my PGCE that do have evidence base behind it. But, particularly in my role leading English, I would like to be using a lot more research in terms of the best teaching practices around teaching English in the whole-school, because I've got a degree of influence there. And that's one area that I would really love to have time to properly flesh out and uncover what works, what doesn't work, in the field of English. That's what I would really like to be able to do - but the main source for me to develop in that role is with half-termly phase meetings where all the English teachers in the borough get together. Those would use a certain amount of evidence bases [sic] but also a lot of DfE guidance and materials and things like that.' (Teacher)

This need for alignment also explained the apparent move away from a focus on research evidence in one of the 'counter-factual' (CF) schools:

Vignette 3: shifting priorities and evidence use in CF1

The New Academy was located in a very deprived context on the outskirts of a small city, with over two thirds of pupils entitled to Free School Meals. The secondary academy was opened in a new building under the previous Labour government. The academy was successful in raising attainment standards during its first few years, leading to an Ofsted inspection in which it was rated as Good, but results then declined and the school was put in Special Measures, so the sponsor asked an existing Multi-Academy Trust to take over the running of the school.

The New Academy's former Vice Principal had worked with the original Principal to design and lead the new academy. Throughout her time at the academy the Vice Principal had lead responsibility for its research approach as well as its strong relationship with a local university. She was clear that research and evidence were absolutely core to the New Academy's ethos and described its capacity and effectiveness at using research as "as strong as anything I have known". This commitment came from the Principal as well as the academy's sponsor: "we paid attention to the research… when there was decision to be made, the way in which it was made would be to turn to research as a way - either practitioner research or existing research - as a way of informing that decision". Feedback from pupils was another source of evidence that the senior leaders drew on extensively to inform decision-making. The commitment to research was also manifested in tangible ways: for example, a significant number of staff were supported to undertake Masters degrees and there were strong links made with academics across the university, often leading to exciting curriculum enrichment projects.

When asked to define 'evidence-based teaching', the Vice Principal stated that "there are some things which are now known confidently", but this knowledge will always be "open to challenge and open to change" and what works in one school will not necessarily work in another. Therefore you need a "combination of criticality and context sensitivity… (to) challenge that distilled wisdom approach. If there was a distilled wisdom, we would have sussed it by now".

In practice this definition meant a process of constant change in many areas: for example, the leadership team reviewed and changed the school's behaviour policy three times during the time she was there. For some of the school team this provisionality was frustrating: "we kept coming back to the concept of fidelity, because there were people in that team who said: 'Look, let's just find out how to do it really, really well and do that like crazy for a long time.'"

The current Head of School at New Academy was appointed by the MAT. He had taken a very different approach, often drawing on improvement strategies learned at his previous Outstanding rural school. His focus was to try and "rescue achievement" by attending to the basics in terms of recruiting high quality staff and establishing norms around expectations, standards, uniform, attendance, and

behaviour. GCSE results improved after his first year in post but then declined below the national floor again the year after.

While the Head of School was currently focused on establishing core standards in the school, he recognised that the journey of improvement in such a challenging context will take many years and that if they are to achieve transformation they will need to avoid getting "caught in the cycle of kind of the last strategies". He was working with the staff on a five year vision and strategy which can move the school to the next stage and is feeding in research and evidence in "bitesize chunks" as part of that process. He was in the final stages of completing a Masters that he had started whilst in post at his previous school, which had been frustratingly slow at first but he now described as 'fantastic'.

The Head of School was clear that he wanted his staff to focus on "hard evidence that tells them how effective has my teaching been." He was not convinced that staff across the school will benefit from engagement with research more widely as it "can be a bit nebulous and it's all very well sitting down and chatting about something but actually is it going to make a difference?" At this stage he saw it as his job to feed research and information in to the staff and to give them opportunities to reflect, for example through peer observations or lesson study.

In the others, changes in priorities alongside external changes in staffing were also important - as explained by the head teacher in CF2:

External priorities and staffing changes

'The new curriculum, new SEND regulations, life without levels – because so much of that is absolutely fundamental and the foundation building blocks of all teaching and learning, it needed all the staff from all the Trust schools in the same room at the same time doing the same thing to introduce things, to move things forward, to get everybody understanding where we're going, and I think the realisation that that had to be across three schools and that we had a school in special measures with – we have had a huge turnover of staff in that particular school.'

'We weren't assured enough that the learning sets would be able to produce at speed what we needed these changes to be made, and in lots of ways, the major essence of a research learning-set is that things can change, things can move; your research changes what you're looking at as you're working through it. Much of this stuff has had to be implemented rather than researched. So we couldn't get the staff to work in a learning set to think about what software and assessment system we were going to use. It had to be implemented; we had to train the staff. So perhaps we had to use a staff meeting to introduce that that could alternatively

have been around the learning set. So it was about prioritise quick implementation against the longer-term research benefits, I guess.' (Headteacher)

In CF3, school expansion was blamed:

Vignette 4 - Evidence use in CF3

This 11-18 secondary converter academy had a slightly lower proportion of students in receipt of Free School Meals than the national average. The school received consistently Outstanding Ofsted grades over an extended period of time but then, in the last two years, received a much more critical Ofsted inspection. The interview for this vignette was conducted with the former Deputy Head of the school, who left before the recent critical Ofsted inspection.

Reflecting on why the school might have declined in Ofsted terms, having been so successful over such a long period, the former Deputy Head acknowledged that there might be many explanations that did not relate to the school's long-standing use of research and evidence-informed practice – for example, the school had expanded significantly some years before, putting pressure on its existing systems and culture. He did argue that implementing the pedagogical model in the school had required a sophisticated understanding of the constituent elements, and an ability to protect and develop these in the face of other priorities and pressures, which perhaps became more difficult once he and the former head had left. Whilst they had tried hard to distribute leadership and to ensure that all staff had a deep understanding of the pedagogical research and principles that underpin the model, including through structured professional learning communities and the use of action research cycles, he acknowledged that this was not always as systematic as it perhaps needed to be.

Reflecting on his recent experience as a head teacher in another school and on a review he had undertaken of evidence tools such as the EEF Teaching and Learning toolkit, his concern was that the attempt to create a 'Reader's Digest' of research might mean that teachers develop a superficial understanding and 'tips and tricks' approach rather than a deeper commitment to developing their pedagogical content knowledge and expertise. He has tried to prevent this in his new school by building in significant time for staff to engage in professional learning – for example with nine professional development days each year as well as two hours once a week for Professional Learning Communities. The challenge, in his view, was to sustain this at a time of tightening budgets and sharp accountability pressures.

Engagement

For this study, engagement with research is defined as orientation regarding the importance of drawing on research evidence to inform and improve practice, and having conversations about the evidence.

Orientation towards the importance of research evidence was related strongly to **the need for such evidence to be problem- and practice-focused**, alongside other research. This meant that teachers would be more likely to draw on research evidence in their practice changes:

> **The need for evidence that is focused on practice issues**
>
> 'I think that our teachers are constantly looking for those things that work or, yeah, and in the way that we gather evidence in the classroom, we look at that all the time, you know, we have regular work scrutiny moderation and those are really good times to highlight what's working and then it's those ideas that are built on, so it's not always like existing sort of research that's out there, those systems and processes might have happened via a learning community so that they're implemented but then once things are happening in a classroom the teacher will sort of do that quite naturally.' (CPD lead)

In addition, most teachers were unlikely to be convinced by research evidence on its own: **they needed to be able to have this backed up by observing impact or hearing trusted colleagues discuss** how it had improved their practice and outcomes for young people, as this vignette illustrates:

> **Vignette 5: the need for research evidence to be supported by implementation in school C2 (teacher perspective)**
>
> In terms of reading articles and all of those things, reports and those things, I don't think -, obviously it has an effect but not as big as an effect of when you see things and when it's physically done…. I think that's [the same] for the majority of people but then it comes down to individual preferences, some teachers probably like to go and read and that way they know what they're doing, me personally if I see things and if I take part in something, then I'll be easily able to adopt that approach or do that lesson with my class.
>
> [interviewer] *did you have to see that in action yourself to be persuaded of it or would you have been more persuaded if that experienced teacher showed you all the research evidence on it?*
>
> I think I would be more persuaded. I saw evidence because she taught a lesson so she showed me what was expected and that's why I took it in, but I think if she

> just gave me articles and she said 'read this and you need to adopt it in your lesson', most likely I probably wouldn't but because she told me 'read this chapter' and then she showed me how it worked, that's why I was more inclined to doing it.'

Orientations could be affected by senior leaders, for example providing evidence/justifying to parents why they don't set homework. Others identified its persuasiveness in justifying why change was necessary for busy teachers; providing the biggest impact for least effort; looking to research rather than past experience to indicate what will work best.

One CPD lead stated their school introduced staff to new research evidence in a *'learning community type way'*, where they work with and observe each other. This ongoing experiential learning process was said to enhance the 'validity' of the evidence among staff. In a separate example the CPD lead at one of the schools that was less research-engaged overall (but with pockets of engagement) described how for a new approach or intervention to be even considered by school leaders it was essential that it was grounded in strong/robust evidence because of the pace schools were operating at and the limited time constraints they had to engage with evidence.

Although most teachers stated evidence was liable to increase the likelihood of them altering their practice, their responses were more varied. A teacher at a more engaged school in the main case study sample spoke in a spirit of criticality claiming that while their decision-making would be informed by the evidence presented by a source like EEF, for example, that there is no evidence as to the value of setting; they would not discount the idea entirely for fear it was an 'oversimplification' given the very many different forms that setting can take.

Teachers at two schools emphasised that ultimately they are governed by the head teacher's direction. In one, the teacher referred to the use of interventions where certain children were taken out of their class. Despite feeling that this might not be appropriate, based on their professional instinct and knowledge of their class, their view was '*as teachers, we can't say no'*, on the basis that the intervention was underpinned by evidence. In a separate example, the teacher at a less engaged school felt justified in engaging less with research evidence because of the successful status of their school and that 'y*ou could argue - why change things that don't need changing?'.*

In relation to **expectations of middle leaders,** those in both primary and secondary schools (often with strong head teacher/SLT steer) were sometimes expected to lead EIT activity such as learning communities, R&D groups, and working parties that may involve some level of EIT or lesson study. In the more engaged schools, middle leaders were expected to look for, read and translate research for the staff. This might involve working on key priorities or areas of particular interest for the school, then guiding the development and discussion with staff. In the most engaged schools, all staff were

expected to engage in CPD/twilight meetings/lesson study that may involve EIT. Middle leaders were expected to lead on school development plan priorities, which may or may not include EIT/evidence-related actions.

Where there was a **formal expectation for teachers** to engage in EIT, this tended to be **in relation to participation in some form of whole-school mechanism organised by either a senior leader or research lead**. For example, three of the more engaged schools had teacher learning communities or research and development groups (based on whole-school priorities) which staff were expected to attend and actively participate within. However, while there were lots of examples of individual staff going beyond this level of engagement with EIT (e.g. participating in Masters programmes and wider reading and interest around evidence pursued in their own time etc.), head teachers in the main were very cautious about making additional formal demands on teacher time to engage directly with EIT.

Some head teachers saw the importance of context in affecting orientations towards research evidence. **In some of the less engaged schools, being under pressure meant that only research that was very clearly focused on assessed results would be considered**. Others saw the changes to curriculum as *'opening up a space'* to introduce research evidence:

> **Positive inspection creating room to focus on research evidence**
>
> 'I'd say that we're probably a little bit further along the line [towards EIT]… this is probably quite an important point: I think we are – our school now is more open to this sort of thing, because we've been through an Ofsted inspection since [last year]. And the Ofsted inspection went very well and we got 'outstanding' and because of that Ofsted aren't going to bother us anymore. So we actually feel like we have a bit more freedom. And I think that actually…means that we are kind of a bit more willing to do things for reasons other than Ofsted's benefit, and obviously that creates a bit of space for perhaps doing things a bit differently, if the evidence suggests that it's effective.' (Head teacher)

Several teachers in the most engaged schools suggested they had become more positively orientated towards research; but this was not the case in less engaged schools.

It is possible to see **orientations on a continuum**:

- A small number of teachers against the use of research evidence.
- Neutral (generally due to lack of time or not seeing the value).
- Generally able to see the value but needing to be convinced by seeing its use in action (most teachers).

- Having both access to research and seeing the value. It should be noted that in this latter, small group, a number of teachers/respondents were undertaking or had recently undertaken Masters or doctoral study and this was seen as a driver of their engagement with evidence.

There were some differences by staff group. For head teachers, all said research evidence was important, most stating it was *'essential', 'vital'*, since teachers need to ensure they are making a difference and that their efforts and time are used most efficiently for pupil outcomes. One noted that it would be wrong not to use the available information to improve practice, to do their best for pupils.

Research-engaged heads stressed that time and resources are limited so the biggest impact for least effort was critical to avoid time wasting. They saw it as important to have independent, valid evidence to guide teachers towards the most effective interventions: evidence was used to challenge, justify and guide wise spending. Less engaged head teachers qualified the importance of research by emphasising:

- Its context specificity.
- Their preference for teacher observations/experience.
- That keeping up with evidence was very time consuming.
- There was a need to focus on inspection.

CPD/Research leads also agreed research evidence was important but for varied and sometimes weaker reasons compared to head teachers. For them, evidence was seen to be important because it could guide busy teachers; quantifying effects and the use of numerical data was seen as informative; and it could help ensure all learners have access to high quality education and innovative, proven strategies. Such staff doing Masters degrees had increased awareness, but most saw the importance of the 'bigger picture' from valid external research, and understood that using evidence well can mean schools can make better progress.

Other teachers were generally agreed it was important for making the right decisions to improve practice; for their professional development; to improve pupil progress. But teachers tended to have more reservations about its application in practice such as:

- Being sceptical of the applicability to complex reality.
- The need for time to adapt to their context, and seeing this as the responsibility of leaders.
- The need to see practically applicable research, feeling a disconnect with theoretical research.
- Seeing it as potentially important, but underused due to time and difficulty in interpreting and translation.

In relation to being equipped to use research, most schools/staff felt that **they were in the same or similar place in both the first and second years**. Slight improvements were identified by five head teachers. For these leaders, staff capacity changes were cited as the main factor enabling positive change, with permanent and stable staffing, key senior leaders acting as champions, and willing staff, allowing engagement with EIT through CPD, with - in one case - more openness and freedom following a recent outstanding Ofsted judgment.

Most head teachers acknowledged the importance of research but that they were at the start of their EIT journey. CPD/Research leads' views were broadly aligned with what head teachers reported. One Research Lead emphasised how a small number of leads were well placed to interpret evidence and filter the key messages but they were less confident that the evidence was acted on by the wider staffing group *'…the people who are leading it know their stuff and can apply it in an easy digestible form… it's what happens after that where the problems start'.* (Research Lead)

Some teachers stated they felt more equipped to engage with EIT than they were the previous year. For the most part, any enhanced sense of feeling more equipped was marginal and tended to be as a consequence of some form of whole-school policy shift via whole-school training or the more systematic use of research digests. One teacher revealed how a new role in the school had made them more proactively search out evidence (although they viewed this almost entirely in terms of pupil data) as they needed '*to be more involved in the wider picture, rather than it just being about me as a class teacher*'.

However, two teachers stated they had regressed in how well-equipped they felt. One felt overwhelmed by the recent scale and pace of policy change and how that had '*filtered through to the classroom*'; leading to them feeling '*slightly less*' well-equipped to engage in EIT and to be a less confident teacher in general: '*I feel like so much has changed in education in the last year that I sort of think, 'Oh, my God. I don't know what I'm doing anymore.'* (Teacher)

In contrast, another teacher was keen to distinguish between their capacity to feel well-equipped which they stated was high due to the '*historical background*' of their PGCE and attendance at relevant courses, and the reality of being within the school environment and not having the '*time to do it*' which led them to state '*if in reality I haven't got the time to do it, then in a way I'm not equipped*'.

Conversations about research were mainly articulated as **having taken place in the more research-engaged schools**, and were usually described as being led by senior leaders. These were often formal conversations in staff meetings and departmental meetings. Some teachers and leaders described taking part in coaching conversations, or in conversations between teachers and senior leaders.

There were some examples of informal conversations, but in more informed schools, conversations about evidence were modelled by senior leaders and this was in contrast to less engaged schools, for example one teacher noted '*I wouldn't necessarily have those conversations with senior leaders. It may be mentioned or dropped in after twilight sessions or in a particular CPD meeting or drop-in session, but it's not something explicitly that we are talking about, if you see what I mean.'*

Conversations typically focused on problems, and the role of research evidence in relation to such problems. Two of the more engaged head teachers picked up the language being used in such conversations - **phrases such as 'the evidence shows that…' or questions such as 'what does the evidence show?' were discussed as being used**.

Conversely, in less engaged schools, research evidence did not form a strong part of these conversations: *'I would say that we are definitely more interested in the practical sides of it – how we can apply that rather than, you know, actually looking at kind of – at the citations and where ideas have come from.'*

Even in more engaged schools, leaders noted that informal conversation tended to be more shallow, for example picking up TES articles; and, in the words of one, subject to 'Chinese whispers':

> **Shallow informal conversation about evidence**
>
> 'Somebody just yesterday was talking about they went to a seminar at the Education Show at the NEC and they were talking a little bit about what they'd heard there. Sometimes I suspect that sort of thing might not be any better than anecdote, really, but – rather than being a really good, solid piece of evidence, and then they can be a bit Chinese-Whisper-y-ish in that. But there's a lot of teachers from this school will talk to other teachers, and now those teachers from the other schools will have heard from a teacher at another school and these kind of things get passed around about what works or what doesn't work. Sometimes that can be really useful. Sometimes I'm not sure how useful it is, actually. It's probably quite a long way from what I'd hope would be good, evidence-based practice.' (Head teacher)

In just three schools were there claims made that conversation about evidence had moved forward over the course of the project.

Use of evidence

In this study, evidence use is defined as any activity where research evidence is actively used to investigate and change practice. Awareness, engagement and use of evidence are highly interrelated and the previous section detailing engagement with research has

provided some examples of the ways the highly-engaged schools use evidence to investigate practice 'problems'. In this section we focus on using evidence to change practice.

It is important to note that there was relatively little evidence from the case study analysis of teachers directly importing research findings to change their practice. This is because use of research by teachers was less visible as **senior leaders and departmental leaders in some cases mediated research** for use in the school.

This might be via:

- CPD and inset.
- Staff meetings and forums.
- SLT team discussions leading to further action.
- Libraries of research resources.
- Expecting staff to undertake Masters qualifications.
- Group reading activities.
- Use of expert practitioner middle leaders to provide translation.

In these schools, there were pockets of evidence use by teachers. So, for example, in one of the more research-engaged schools, the teacher described how a staff meeting drawing on research evidence informed change:

> **Drawing on research evidence in staff meetings**
>
> 'The head had had discussions with the teaching assistants prior to that about, you know, how the – their concerns, feelings, how they were getting on, etc., and he was feeding back some of that information to the teaching staff. And then, alongside that, sort of…presented the information from the Sutton Trust about the most effective ways to use your teaching assistants and what sort of jobs they should be doing, and then we were using that to discuss sort of what changes we needed to make and what discussions we needed to have with our teaching assistants and our timetabling and that kind of thing, based on that research sort of partnered with the feedback that he was giving us and what the teaching assistants had say.' (Teacher)

In another, the CPD lead discussed the development of a learning community:

> **Learning communities and research evidence**
>
> 'This was the first learning community we set up and we introduced Dylan Wiliam first. We talked about pedagogy and revisited that stuff. We looked at inside working with the black box and all of those bits of documentation first so we gave it a proper background historical context. Then we asked the teachers to do peer to peer observations where they would first look at each other's practice and further on down the line they started to develop small interventions in their classrooms and then come back and share best practice, what works, what doesn't work. And from there, we developed a number of systems and processes across the school which have been really powerful.' (CPD Lead)

In such schools, senior leaders drew on trusted synthesisers of research: Hattie, EEF/Sutton Trust Toolkit and other EEF work; Dylan Wiliam's Twitter references and others e.g. subscription to BELMAS to implement changes. Focuses of research used included:

- Metacognition.
- Growth mindsets.
- Marking and feedback including Assessment for Learning.
- TA deployment.
- Homework.
- Literacy – reading and writing.

Use of research in these more engaged schools tended to be more **systematic and sustained, trusting key sources but following up with other sources and further checking**. This was a rare example of apparent whole-scale adoption:

> **Adoption of research evidence**
>
> 'Cued articulation. So, and that's about how you pronounce sounds, so it's linked to speech but it's obviously linked to literacy and phonics. And there was research, the beginnings of research done that our communication therapist was aware of and then the opportunity for the school to engage with that came along. And so we did and it has changed our practice and our literacy policy will reflect that. […] We had a selection of interested teaching assistants and a selection of interested teachers who engaged with the communication specialist on the research and did that with a small group of learners across the school and then is now just embedded as part of our practice.' (Head teacher)

Much more common was using research evidence as a springboard for changes, integrating it with specific school processes and needs (in this case, linking parental engagement research to changes to parents' evenings):

Research evidence as stimulus for change

'We looked at a piece of research… the headlines were, what's the difference between school and home in terms of the impact on children and their progress? I mean absolutely fascinating stuff. The point of which school according to this research has more impact than home on a child's progress is fifteen years of age, so year 9. And so that's a great headline to share isn't it? So of course the thing for us is then what are we doing year 7 to 9 to make sure that we support the parents in having an impact. This piece of research said it's, the thing that makes the biggest difference so they gave us an example. A child is being taught, sorry a child reading to their parent has double the effect of a child who doesn't read to their parents, so someone listening to their child read. A child being taught to read by their parent has twelve times the impact of anything else… So you know I suppose there was an awful lot of evidence around social capital rather than financial capital in terms of children and their development, but what we do is we had a look at that and we were looking at how we can support the parents, because taking that to the next level for older children it's the parent working with the child and their homework from doing it for them, which would have the biggest impact. So we, as a result of that, introduced evening for years 7, 8, 9 and parents not information evenings as we have in the past, but evenings where we had every department talking to parents about how they could support their child in their learning.' (Teacher)

In others, one-off studies tended to be mentioned, with no clear systematic approach, or use of CPD that may not be based on research evidence, as in these examples:

Use of single evidence sources: mathematics and marking

'Possibly in maths. It's not something that I personally have been involved in, but our maths leader has introduced block teaching. It's to do with blocking the concepts together – so where you teach all the multiplication aspects in one theme, built around multiplication or division, rather than teaching it a couple of times throughout the year. So it's a more in-depth way of looking at a topic. My understanding is that there is an evidence base behind that. I think that's what she said at the time when she launched the project. So that's how we've been planning our maths in the past year.' (Teacher)

'We also decided a new marking policy should be implemented, well the school did. And that was about a year ago now. And again I can't give you the exact sources, but I know that a lot of research was done and I think some of it suggested that long conversations between pupils and teachers really was unnecessary. The school and some middle leaders looked to try to develop a way to have those discourses shortened, but still to have an effective way of giving feedback to children. I think

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> they drew on various ideas and they've come up with something that I think now is an excellent way of giving feedback. I think it's very manageable. I think it had been proven that various parts of it did work. I don't know if other schools do it in exactly the same way we do.' (Teacher)

Research use in the main sample consisted of undertaking **evidence-informed small scale, classroom focused enquiry.** Most commonly mentioned was individual action research, articulated well by one head teacher in a strongly evidence-engaged school:

> **Evidence-informed classroom enquiry**
>
> 'Oh, it's been brilliant, the teachers have really enjoyed it and got very passionate about it. In September our first three or four adult learning sessions where everybody shares the findings of their research, everybody has presented to the rest of the teaching staff for 5 minutes on 'OK, this is my research project, this is what I did, this is what I measured, this is what I found out' and we're sharing things that didn't work as much as things that did work, which is also really important, you know it's important to find out the stuff that doesn't make a difference. Teachers learnt from that they you know 'oh that's great, I'm going to try that out in my classroom, that's really useful, oh that's given me an idea for my project this next year' and we're developing a sense of well I think sort of professionalism and professional ownership of the curriculum and the work that we do with children. So yeah, it was very positive.' (Headteacher)

Teacher-led 'mini-projects including extended projects, PhD and Masters and in one case externally funded research were also mentioned for example:

> **Mini-projects**
>
> 'That's [M Ed] been crucial and then these mini-projects that have happened with staff who have not necessarily been doing the M Ed course, but have just been doing their own individual research. […] It depends on the research, but usually to quite a large extent they are drawing on… If they're doing something on, say, literacy then they will be using a lot of external research.' (CPD Lead)

Others discussed trialling changes based on integrating evidence of different types:

> **Working with multiple forms of evidence**
>
> 'I think that's [Philosophy for Children] certainly something that I've noticed that changed my practice since I kind of found out about it. I think it's something that's definitely worth integrating into the classroom. […] at the time obviously it was taking kind of secondary sources of evidence, so from text books and, you know, publications on the internet and things like that, but then, as well as that, I did a –

> obviously it was at a very small scale, but I did do a piece of, you know, research myself. Went into a school and spent time with children. It was seeing how it impacts on creativity.' (Teacher)

More rarely were collaborative projects discussed and these did not involve other schools.

About half of the schools reported that they were monitoring and evaluating their interventions and/or individual projects/trials, but methods were mainly informal and subjective, for example through staff and sometimes pupil feedback. However, when pressed, few schools could discuss the outcomes of such work: one Headteacher discussed teacher outcomes around enjoyment and motivation, and another discussed using positive outcomes to inform future training.

In a small number of schools, timetabled opportunities enabled evidence use, but very few schools were involved with universities, local and national networks or cross-school collaboration for research purposes.

3.3 What are the key influences on the awareness, engagement and use of EIT by schools and teachers?

Summary

- Strategic leadership was the most prominent enabler mentioned by most head teachers throughout the study.
- Head teachers did not expect all staff to engage with research evidence. They worked with willing staff, including TAs and support staff.
- Teachers' time constraints were mentioned in all schools, and were addressed in some cases by scheduling specific time for staff to attend meetings, CPD or other research-related groups or sessions.
- There were expectations in more engaged schools that middle leaders would implement policies and practices that are underpinned and informed by the evidence in some schools, and they might be research evidence 'champions'.
- School culture was an important enabler, by encouraging enquiry and engagement; drip-feeding ideas rather than insisting on engagement and using professional dialogue, such as informal discussions and networking and study groups.
- Enabling structures and processes included agenda items on regular staff meetings; Inset/CPD such as teacher learning communities, lesson study, R&D groups; directed reading; peer observations, appraisals and feedback including targets for whole-school priorities; and external networks such as Teaching Schools Alliances and university links.

Strategic leadership remained the most prominent enabler mentioned by most head teachers in both Year 1 and Year 2 of the study. They emphasised the importance of their role and that of their SLT and other champions in leading EIT; believing in the benefits of engaging as a way of identifying and addressing issues requiring improvement; and determination to make it happen. This included senior leadership teams being selective and strategic in how they identified, presented and led the use of evidence, often focusing on key priorities for example, growth mindsets; selecting evidence that informs policies and strategies; or making judgements and filtering the dissemination of research evidence to staff. Examples of how this worked in some schools included:

- Whole staff forums such as inset/CPD sessions would start with an introduction to the evidence as the rationale for change, to persuade staff of the merits of a new policy or practice. Senior leaders would outline their interpretation or synthesis of the evidence, identifying the specific relevance to their context. A fit with school values and ethos was also identified as important.
- When new or additional evidence was found, SLT would discuss if and how this could be shared with other staff and used.

Expectations of staff were important. Head teachers described being careful about not overloading or placing additional expectations on staff to engage in research. Rather, they chose to focus on working with willing staff, including TAs and other support staff. Leadership of EIT was expanded to include motivated staff at earlier stages of their career to encourage inclusion of new ideas and approaches. Teachers' time constraints were addressed by scheduling specific time for staff to attend meetings, CPD or other EIT-related groups or sessions. There were expectations that middle leaders would implement policies and practices that are underpinned and informed by the evidence in some schools, and they might be EIT champions.

School culture and ethos were seen to be important including:

- An 'open door' culture and an ethos supportive of innovation.
- Encouraging a culture of enquiry and engagement was seen by some as more essential than having formal policies and structures in place.
- Changing the culture around EIT by 'osmosis' - staff absorbing the value, language and practice over time; drip-feeding ideas rather than insisting on engagement.
- Using 'professional dialogue' - informal discussions, informal networking and study groups.

Structures and processes in place included agenda items on regular staff meetings; Inset/CPD - teacher learning communities, lesson study, R&D groups; directed reading; peer observations, appraisals and feedback including targets for whole-school priorities; and external networks such as Teaching Schools Alliances and university links.

Some of these themes were summarised by one head teacher, who highlighted that strategic leadership should include governors' buy-in, and consideration of the time needed to foster a culture for effective implementation and embedding of EIT:

> **The importance of leadership**
>
> 'It's got to come from the top. The strategic leadership in the school's got to value this and understand how it's got a part to play. It has to persuade people and be dogged in making it happen over a long period of time. What you need to do is create that culture so it's not going to happen unless it comes right from the top, and we're talking governor level, there's got to be complete buy in at the top.' (Head teacher)

Taken together with the analysis of school interviews in the first year, this suggests that developing **a school research evidence culture** was a necessary factor in enabling middle leaders and teachers to embed EIT. We distinguished three broad categorisations of evidence culture:

- Six schools evidenced most aspects of a **whole-school research evidence culture** where it appeared that at least some members of all staff groups were actively aware, engaged in and using research evidence, although others shared some of the features associated with it.

- In perhaps a further five to seven of the cases in Year 2 where the head and senior leadership team were highly proactive in creating such a culture, we found low awareness of, and low self-directed engagement with, evidence by individual teachers. In these schools, there was a **leadership research evidence culture** but not a whole-school culture.

- The remaining eight to ten schools in our sample could be characterised as having an **unengaged research evidence culture**. This was despite the selection strategy for the case studies, which aimed to create a balanced sample. This might suggest that some schools are adopting the rhetoric of EIT, but not embedding it in their actual practice.

The strongest evidence cultures were associated with dedicated time across staff groups; open learning cultures; high levels of research engagement across the school; strong, prioritised support structures; policies and guidance on EIT; and strong, deep and multiple external research-related relationships. The live evidence review interviews broadly supported this analysis. The data on highly engaged schools indicates, though, that even here there is no expectation for all staff to engage in research: however there is an expectation that some staff beyond the SLT engage in research, as indicated in Table 3-3 below.

Table 3-3: Categorisation of school evidence cultures derived from qualitative analysis

Weak evidence culture	School leadership evidence culture	Whole-school evidence culture
No dedicated time to engage with research evidence	Dedicated time for senior leaders	Evidence engagement embedded within time allocated for school improvement practices
Narrow culture focused on immediate imperatives		Open learning culture, focus on longer term goals
Inconsistent and/or low level of engagement with research evidence across the school	Senior leaders filter research evidence	Senior leaders filter research evidence, staff engage with this critically
Few staff motivated, skilled and confident in engaging with evidence	Senior leaders motivated, skilled and confident in engaging with evidence	Some staff in other groups motivated, skilled and confident in engaging with evidence; staff expect to engage with research to improve practice
Support structures - reading groups, research projects, learning communities - limited or unavailable	Support structures in place - reading groups, research projects, learning communities - that all staff are invited to engage in	Research evidence is part of routine processes, meetings, CPD and school improvement practices of the school
No or very limited informal policies and guidance on engaging with research evidence	Few informal policies and guidance on engaging with research evidence	Some informal policies and guidance on engaging with research evidence
Few or no research-related relationships with other schools and external organisations	School leader research-related relationships with other schools and external organisations	Research-related relationships with other schools and external organisations beyond the SLT in place in some cases

3.4 How consistent are the messages on evidence-informed teaching that come from government and wider influencers?

Summary

- DfE messages on EIT are high level but reasonably consistent. DfE's voice in this area is less strong than that of external organisations that have a more dedicated focus on research.
- In Initial Teacher Training, universities appear to provide a stronger grounding in EIT than schools and other providers.
- Although some interviewees in the qualitative research cite social media as an important source of information on EIT, an analysis of social media outputs suggests that actual research-based content is rare.

3.4.1 Content analysis of policy documents

The content analysis examined a set of policy documents with a variety of purposes:

- DfE documents that **promote research use for school improvement** focus on promoting awareness of research and how to use evidence in school improvement. DfE's relative output is less in this area. In other words, it appears that other organisations (including EEF and NFER) produce more in this area. For instance, the ratio of EEF to DfE output is 3:1 making it relatively more likely (but not definite) that schools and teachers will see EEF messages rather than DfE ones.
- A small majority of DfE documents promoting **general school improvement** discuss evidence to some degree (notably including the *Educational Excellence Everywhere* White Paper), while documents for other purposes (business plans etc.) tend not to mention evidence.

The qualitative research summarised in the previous section supports this, indicating that teachers and school leaders are more likely to look towards the EEF as well as specialist organisations (such as universities and BELMAS) and a small number of high-profile academics for research syntheses and insights, rather than the DfE or its agencies.

There was evidence from the qualitative research that some teachers and school leaders see current policy as more evidence-based than in the past, although there was also contradictory evidence on this. The need to implement new government policies and meet the accountability requirements placed on schools does appear to dominate the

minds of school leaders and teachers, leaving little time for research engagement or use in many cases. That said, the highly engaged schools and some of the wider sample of case study schools were finding ways to engage with and apply research as part of their improvement efforts, indicating that policy did not prevent or inhibit EIT where schools see it as valuable. There was **no clear evidence that these EIT-engaged schools were adopting EIT because of any particular government policy or initiative**, although several of these schools were participating in EEF-funded projects. It is notable that neither the R&D role of Teaching Schools nor ResearchEd were mentioned by head teachers or teachers in the qualitative research as significant influences on their research engagement or use.

3.4.2 Content analysis of Initial Teacher Training course materials

The content analysis of **Initial Teacher Training (ITT) documents** via the Carter Review report[13] revealed a **mixed picture regarding promotion of the use of evidence**. Most evidence indicated that EIT in Initial Teacher Training programmes was largely the province of the university contribution, where this exists. The more impressive course models focused on preparing teachers for a lifelong career, rather than simply 'meeting the (teaching) standards' and passing the course, though that is clearly a short-term necessity. Courses, especially the university-led ones, attempted to secure that longer-term preparation through academic engagement with Masters-level assignments, although there were also instances of this via professional level assignments.

It is notable in the qualitative analysis that **many of the most highly EIT-engaged teachers and leaders were involved in Masters-level study and saw this as the prime inspiration and source for research engagement**. In a small number of cases, teachers related this to their initial PGCE training. The School Workforce Census does not capture what proportion of teachers have a Masters degree, so it is not possible to assess how recent funding changes might be impacting on participation rates. The moves towards more school-led Initial Teacher Training, with a reduced role for HEIs, could lead to a reduction in the number of teachers with a grounding in research evidence and its application to teaching over time.

3.4.3 Social media analysis

The final focus of the content analysis was on **social media outputs**. Combining our separate social media analyses, it appears that **actual evidence-based content and**

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[13] The Carter Review of Initial Teacher Training was chaired by Sir Andrew Carter, a primary head teacher, on behalf of the Secretary of State. Its report was published in January 2015 and can be accessed via the DfE website: https://www.gov.uk/government/publications/carter-review-of-initial-teacher-training.

discussion about EIT makes up only a very small proportion of all education-related content. This finding is perhaps surprising, especially given that a number of interviewees in the qualitative strand of the research stated that social media was an important source of information on EIT for them. Nevertheless, the social media analysis indicated that there were relatively few teachers or other commentators tweeting or blogging about EIT and the majority of messages are conversations concerning resources and their quality, or the promotion or experience of events. There were few dedicated Twitter hashtags for EIT meaning that hashtags tend to be all-encompassing. The result of this appears to be that messages relating to evidence and its use may get diluted and lost in a more general sea of messaging.

4. Discussion and conclusions

This evaluation has revealed a number of important findings that indicate the level of progress towards an evidence-informed teaching profession in England. The findings also deepen our understanding of the processes involved in developing evidence-informed teaching; for individual teachers, for schools and across the wider system. Inevitably, evaluating progress across a system of over 24,000 schools is challenging given that change will always be differential. An excellent teacher or school is made up of many facets, and evidence will only be one contributory factor to that complex whole. Even where evidence is drawn on to inform practice, this will not be a linear process with standardised responses and predictable outcomes, because the evidence will be interpreted by practitioners in different contexts and with different levels of capacity and expertise. Equally, the relatively small scale of this evaluation has not allowed for us to dig beyond the surface except in a small number of schools.

An important point to note in relation to all the project findings is the importance of language. The evidence review indicated that there is no clear, agreed understanding or definition of research evidence. Throughout the project we have defined key terms, in particular 'research' and 'evidence' as set out in the Introduction, but we have been struck by how widely these terms are interpreted in practice, and by how different definitions lead to very different conclusions. For example, if the definition of 'evidence' is drawn widely to include school-level data and reading magazine articles about teaching, then almost every teacher and school could arguably be defined as 'evidence-informed'. Our view is that a tighter definition that focuses on evidence collected through systematic research is required, even whilst recognising that this evidence will then be combined with other sources of expertise and knowledge and transformed in use. This clearly has implications for DfE messaging as well as policy efforts focused on encouraging schools and teachers to become more aware of, and engaged with, evidence in all its forms.

4.1 Discussion of key findings

This study supports the emerging recent work noting **the reciprocal relationship between research and practice**; the two inform and are informed by each other, clarifying the need for research brokerage and mediation. Nonetheless, the evidence specifically from an education perspective is still sparse as indicated in Section 3.1.

Crucially, we still know little about how evidence use can shift teacher practice and pupil outcomes from robust studies. **The focus on practice and organisation is vital.**

In the literature review presented in Section 3.1, we identify that across the major studies of evidence use the need is to include features related to (1) the nature of the research and evidence itself, (2) effective communication processes taking into account variation

in (3) teachers' needs, experience and skills as well as (4) the characteristics of the school contexts in which they work. Missing in the review is (5) wider context (especially the wider school system, economic and social context).

The qualitative interviews with teachers presented in Section 3.2 reveal the ways in which evidence can and does inform their thinking and practice. These findings chime with findings from other studies on research use, highlighting the ways in which practitioners combine and align external evidence with existing knowledge, practices and beliefs.

The content analysis of Teaching School websites presented in Section 3.2 appears to show that **these system leader schools are becoming more engaged with evidence over time**, given that they are demonstrating an increased commitment to research and evidence in how they publicly describe work. However, based on the website content analysis, significant proportions of Teaching Schools are not yet demonstrating this commitment, and practice appears to be particularly weak in the areas of 'Recognising the value of quality evidence' and 'Promoting evaluation – how impact of use is assessed'. A small proportion of leaders and teachers in the qualitative research mention their links with a Teaching School as a source of inspiration or support for their evidence use, indicating that this work is influencing practice across wider alliances to some extent.

Overall it appears from analysis presented throughout Section 3 that **a minority of schools – the five highly-engaged schools that were purposively sampled in Year 2 and one of the 15 schools sampled in the original group - could be said to be fully committed to developing evidence-informed practice**. Features of these schools include:

- They display impressive commitment, with sophisticated practices and deeply research-engaged cultures that they have prioritised and developed over time through strong and sustained senior leadership commitment.
- They draw on robust evidence from a range of sources, often combining this with direct engagement with professional researchers.
- They combine this evidence with their own professional knowledge and understanding of their context – including from school-level data - to define and develop improvement priorities and approaches.
- They utilise CPD and Performance Management to continuously engage staff in reading, discussing and reflecting on evidence.
- As a result, their staff are able to articulate how and why research informs their practice, although the depth and extent of research engagement differs between individual staff members.

- While all these schools have a focus on evaluating their improvement work, none can demonstrate a precise impact from their engagement with research.

At least five of the other schools in the qualitative sample appear to reflect **a strong commitment to research and evidence** on the part of senior leaders, who see their role as filtering and disseminating research to staff and articulating the ways in which improvement decisions reflect the evidence-base. Staff in these schools can often articulate the role of evidence in decision-making and in their own practice, but appear to have a less secure understanding than in the highly-engaged schools and with less space to diverge from what is often a prescribed, whole-school approach.

The small number of leaders in counter-factual schools, presented in Section 3.2, highlighted that **research evidence is not a panacea** – particularly in England's highly accountable school system – so **it must be integrated and embedded within a wider improvement model** that gives clarity on priorities and approaches whilst allowing space and flexibility for collaborative learning and disciplined innovation.

Most of the schools in the qualitative research appeared - as indicated in Section 3.2 - to have less engagement with rigorous research. Leaders in these schools might say that research and evidence are important and might be able to cite examples of where they have drawn on it, but often they prioritise more immediate accountability concerns and are nervous about adding what they see as an additional burden onto busy teachers. In some cases, these leaders might reference research in a strategic way for example to justify decisions already made in relation to Pupil Premium funding. Some teachers in these schools might be personally interested in research, but others are preoccupied with the more immediate needs of teaching.

In relation to progress, then, whilst there were some positive movements evident from the content analysis and qualitative interviews, both elements of the study indicate that over the course of this two-year study overall, schools were not becoming more engaged with research evidence over time.

Finally, in relation to the key research questions, overall, in response to the research question '*What do we know about effective use of research evidence?*', this study finds that:

- There is currently limited evidence into the impact of evidence-informed approaches in schools. The most strongly research-engaged schools were highly effective, well-led organisations for which 'research use' meant integrating research evidence into all aspects of their work as part of an ethos of continual improvement and reflection.
- In the most highly engaged schools, senior leaders play a key role.

- The most engaged schools started from a school priority and sought evidence to help meet this priority.

In response to the research question '*To what extent are schools and teachers aware of, engaged with and/or using evidence to improve practice, and in what ways?*', this study finds that:

- Respondents were aware of different forms of evidence, but generally prioritised sources such as attainment/performance data and other schools' experiences above external research evidence, and this had not changed over time.
- Teachers trusted research when it was supported by other evidence. Most teachers were unlikely to be convinced by research evidence on its own: they needed to be able to have this backed up by observing impact or hearing trusted colleagues discuss how it had improved their practice and outcomes for young people.
- Most teachers interviewed did not feel confident in engaging with research, but they did, mostly, value research evidence influenced by:
  - the value placed on it by senior leaders and, crucially
  - the need for such evidence to be problem- and practice-focused.
- Teachers and schools started from a practical problem and sought out research evidence to help solve it.
- For teachers, 'research use' usually meant drawing on research (directly or as translated by school leaders) to integrate into thinking and sometimes their own practice, rather than directly applying research findings.
- Research informed their thinking and led - at least in the more engaged schools - to experimenting, testing out and trialling new approaches in more or less systematic ways.

In response to the research question '*What are the key influences on the awareness, engagement and use of EIT by schools and teachers?*', this study finds that:

- Developing a school research evidence culture was a necessary factor in enabling middle leaders and teachers to embed research evidence use.
- The strongest evidence cultures (apparent in only a few schools) were associated with:
  - dedicated time across staff groups;
  - open learning cultures;
  - high levels of research engagement across the school;
  - strong, prioritised support structures;
  - policies and guidance on EIT; and
  - strong, deep and multiple external research-related relationships.

Finally, in response to the research question '*How consistent are the messages on evidence-informed teaching that come from government and wider influencers?*', this study finds that:

- At a policy level, other policy organisations have stronger messaging than DfE.
- Government policy is seen as increasingly aligned with research evidence, but this needs to be improved especially in relation to accountability drivers such as school inspection and policy around testing.

4.2   Conclusions and suggested policy directions

The *Educational Excellence Everywhere* White Paper (DfE, 2016:38-39) states that:

> It is not yet as easy as it should be for teachers to find and use evidence to improve their teaching practice because the evidence base is patchy, difficult to access or to translate into action. Too little research is directly driven by the priorities of teachers and schools; too little is sufficiently robust in quality. We will support the teaching profession to access, use and spread high quality evidence, with a greater focus on evidence built into ITT and leadership qualifications, as well as expanding teaching schools across the country.

It set out a series of proposals for addressing these issues, now being taken forward by the DfE, including:

- Support for the emerging Chartered College of Teaching, and their aim to publish a new independent peer-reviewed British education journal.
- The expansion of the Education Endowment Foundation remit to include evidence-informed teaching.
- A commitment in the White Paper *Educational Excellence Everywhere*[14] to help incentivise researchers (and the funders of research) to produce research that can improve practice.
- Publishing an independently developed Standard for teachers' professional development in July 2016.[15]

In addition, on 4 October 2016, the Government announced an investment of around £75 million in the Teaching and Leadership Innovation Fund, to support high-quality, evidence-informed, professional development for teachers and school leaders in areas of the country that were seen to need it most.

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[14] See Educational Excellence Everywhere White Paper
[15] See Standard for teachers' professional development

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This evaluation indicates that these developments may be necessary, but not on their own sufficient, for securing evidence-informed schools and practice across England. The findings indicate that the challenge for policy makers and researchers interested in enhancing evidence-informed practice is not primarily with either the supply of, or demand for, evidence: rather it is with the level of leadership capacity and commitment to make it happen in the context of rapid curriculum and accountability change. This challenge is being taken up by EEF and others - e.g. the identification of EEF Research Hub schools around the country, each of which receives funding with a remit to develop evidence-informed practice across school-led networks - but there is also a need for support at the overall system level, indicating a role for DfE.

Some of the teachers and leaders we interviewed did state that accessing and interpreting research was challenging. Nevertheless, the highly-engaged schools in the study demonstrate that where school leaders and teachers are motivated they can and do find ways to access and embed evidence in their work. This suggests that while the supply of high quality and relevant evidence could undoubtedly be improved, it does not appear to be the fundamental blocker to evidence-informed practice implied by the White Paper. A key development here appears to be the use of meta-reviews, such as the work of John Hattie and the Sutton Trust-EEF's Teaching and Learning Toolkit, which have helped synthesise many different research studies in one place to provide an accessible research resource.

The proposed new peer-reviewed journal may prove valuable in helping schools to access research, but the evidence review highlighted the importance of personal networks and intermediaries for translating research and securing engagement. Our content analysis indicated that organisations such as EEF, NFER and the Alliance for Useful Evidence provide significant messages on EIT to schools, and although from this study we do not know the extent to which schools actually draw on these, EEF's own research indicates a mixed picture. The qualitative interviews indicated that some, more committed, schools are working with individual researchers and universities in this area. The interviews also highlighted that some schools are relying on testimonials from unaccredited CPD providers, with little apparent criticality in the interpretation of this 'evidence'. Finally, the content analysis of social media suggests that the DfE should be cautious about relying on this as a mechanism for raising the quality of debate in this area.

On the demand side, policy has often focused on measures to engage individual teachers with evidence, and the work of the new College of Teachers may well prove helpful in this respect. However, a key finding from this research is that the school environment, which is significantly conditioned by the attitudes and actions of school leaders, influences the extent to which most classroom teachers are encouraged, supported and held accountable for engaging with evidence. Senior leaders often worked

with other leaders and staff as evidence champions across the school – enthusiastic and credible individuals who were seen as key sources of evidence-engaged knowledge and expertise - who might be in more or less formal roles. While the importance of leadership may not be a particularly surprising finding given all that is known about the role of leadership in influencing professional learning and cultures for teachers (Robinson, 2011), it does have important implications for policy on evidence-informed practice, arguing for a focus on building leadership capacity and school-level commitment as a way to stimulate teacher-level engagement. As indicated in the headline findings section above, while the evaluation did not include a survey or other quantitative assessment of the extent to which school leaders in England are engaged with evidence, the qualitative work indicates that a significant proportion of leaders do value evidence, but in a somewhat limited way. As a result, these leaders do not fully prioritise and embed research evidence in the life of their schools in the ways that the highly engaged leaders do – so they could be described as 'evidence-ready' but not yet 'evidence-committed'.

The focus of our recommendations is therefore particularly on how to build on this latent 'evidence-readiness' among leaders, with the aim of shifting leaders and schools to become 'evidence-committed'. We recognise that securing such a shift is complex, not least because the evidence that research engagement leads to tangible improvements in pupil outcomes remains thin. Equally, the report includes examples of where leaders in our interviews argued that research engagement is not central to school improvement or to meeting high-stakes accountability requirements. The small number of interviews conducted with leaders from counter-factual schools also highlights the importance of aligning evidence-informed practice with wider school improvement efforts.

A final consideration in making our recommendations relates to the role of school-to-school support and networks, such as Teaching School Alliances and Multi-Academy Trusts, in mobilising research and evidence-informed practice. The evaluation was not specifically designed to address the effectiveness of these models, although the content analysis did indicate some improvement in Teaching School engagement over the two years. As noted above, some teachers and leaders did cite involvement with a Teaching School as an influence on their work and thinking in this area. However, the Teaching Schools evaluation (Gu et al., 2015) made clear that R&D was one of the weaker aspects in many alliances, while the *Educational Excellence Everywhere* White Paper[16] made clear that the school-led self-improving system has developed faster in some parts of the country than others, with limited school networks and system leadership capacity in some areas. All this may argue for a twin-track approach to further development: in areas where Teaching School and MAT development is relatively advanced, the need may be to build on work to date (such as the 'three greats' R&D programme for Teaching

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[16] See Educational Excellence Everywhere White Paper

Schools that ran from 2012-14 (Stoll, 2015) and the Test and Learn research that ran from 2013-15 (Churches, 2016)), while focusing more intensively on whether and how these network models lead to engagement among member schools. Meanwhile, in the less developed 'opportunity areas', where the DfE is now focused on intensive capacity building, the need may be for a more focused approach to building capacity in specific schools or via targeted programmes, for example through the new Teaching and Leadership Innovation Fund.

In view of the above, our suggestions are as follows for the DfE:

- **Consider conducting further research to test out the main findings in this study**, in particular:
    - Senior leadership practices associated with effective research use.
    - Effective practices in relation to research use by teachers.
- **Support continued relevant research into effective evidence-informed practice.** This suggests continuing work with EEF, building on EEF's expanded remit to develop evidence-informed teaching, via (for example), funding for further knowledge mobilisation trials, requiring funding to be directed towards building capacity for evidence-informed teaching and schools.
- **Consider ways of building on Teaching School leadership of evidence-informed practice in the system**, by - for example - continuing funding and co-ordination for R&D programmes and knowledge mobilisation work by Teaching Schools.
- **Find ways to strengthen school-HEI partnerships**. This work could include:
    - Building on the Researchers in Schools scheme, which places doctoral graduates in teacher training, by expanding the pool of top universities and the number of graduates involved.
    - Reviewing the place of research, including awareness of research methods, in Initial Teacher Education – in particular to assess whether this could be strengthened in school and SCITT-led routes.
    - Mapping and evaluating existing school-HEI research and development networks, such as those in Cambridge, Sussex, London and Sheffield, with a view to developing their reach and role.
    - Encouraging school leaders and teachers to draw on the new post-graduate loans funding to engage in Masters degrees, including those that include a strong focus on strategies for leading evidence-informed practice in schools.
    - Support for HEIs to work with schools in understanding and applying rigorous evaluation methods.
- **Aim to embed research evidence in the professional discourse and practice of teaching.** This could involve:

- o Encouraging an expectation to engage with research evidence in all professional standards, including for specific subject communities, for all teachers.
- **Aim to align policy changes with the best research evidence available.**
  - o This might be achieved by inaugurating an independent research evidence advisory body, consisting of highly research-engaged school leaders and practitioners, alongside respected researchers and other parties such as EEF to review and monitor the extent to which research evidence is aligned with educational policy. The same or a different group could do the same for Ofsted.
- **Encourage senior school leaders to support evidence-informed teaching**. This might include:
  - o Encouraging the DfE group charged with designing the new National Professional Qualifications for leadership to include a stronger focus on the leadership of evidence-informed practice in the core modules for these programmes, and ensure that any new licensees delivering the programmes can demonstrate their expertise in this area.
  - o Making school leaders the primary audience for the new peer-review journal proposed in the White Paper *Educational Excellence Everywhere*[17], and promote this to all schools as a free, high quality resource.

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[17] See Educational Excellence Everywhere White Paper

5.   References

See also the bibliography in Appendix 1.

Alexander, R. J. & Armstrong, M. (2010) *Children, their world, their education: Final report and recommendations of the Cambridge Primary Review*. Taylor & Francis.

Carter, A. (2015) Carter review of initial teacher training (ITT). London: Department for Education.

Churches, R. (2016) *Closing the gap: test and learn* (Research report DFE-RR500b). Nottingham: National College for Teaching & Leadership.

Department for Education. (2010) *The importance of teaching*. London: Department for Education.

Education Endowment Foundation (undated) *Teaching and Learning Toolkit* available <online> at https://educationendowmentfoundation.org.uk/resources/teaching-learning-toolkit.

Hattie, J. (2009) V*isible learning: A synthesis of over 800 meta-analyses relating to achievement.* Abingdon: Routledge.

Hattie, J. (2012) *Visible learning for teachers.* Abingdon: Routledge.

Kools, M. & Stoll, L. (2016) *What makes a school a learning organisation?* Education Working Paper No. 137. Paris: OECD.

Gu, Q., Rea, S., Smethem, L., John Dunford, J., Matt Varley, M. & Sammons, P. (2015) *Teaching Schools Evaluation.* London: Department for Education.

Robinson, V. (2011) *Student-centred Leadership*. San Francisco: Jossey-Bassey.

Stoll, L. (2015) *Three greats for a self-improving school system: pedagogy, professional development and leadership: Teaching schools R&D network national themes project 2012-14 Research Report.* Nottingham: National College for Teaching & Leadership.

Weiss, C. H. (1979) The Many Meanings of Research Utilization. *Public Administration Review* 39 (5): 426–431.

This research was commissioned under the 2010 to 2015 Conservative and Liberal Democrat coalition government. As a result the content may not reflect current Government policy. The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.

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Evidence-informed teaching: an evaluation of progress in England

Appendices

July 2017

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Appendix 1: What do we know about effective use of research evidence?

1. Introduction

The aims of this section are to:

- Summarise findings from a review of reviews of evidence-based teaching.
- Summarise findings from recent research not included in these reviews, focusing especially on recent research in the UK with evidence of impact of evidence-informed teaching approaches on teachers or on pupils' learning.

2. Review of reviews

2.1 Overarching models

In this section the conclusions from a number of recent relevant reviews are presented following an 'umbrella' review approach. Langer, Tripney and Gough's (2016) review of evidence-based approaches to evidence-informed decision making (EIDM) argues that research evidence is only one factor which can influence decision-making in policy and practice. Although a range of interventions and approaches have been developed to cultivate the use of research evidence by decision-makers, they indicate it is still unclear which approaches are effective. Their review had two related stages, the first seeking to identify effective interventions to increase decision-makers' use of research, the second a synthesis of the broader social science literature relevant to evidence-informed decision-making which might support future interventions in this area. Most of the included studies come from medicine and health related fields, where, arguably, evidence-based decision-making is a more developed field. A few, however, come from other areas such as business, social work and education in schools.

In terms of what is effective in increasing research use by decision-makers, in their synthesis Langer, Tripney and Gough (2016, p.1) indicate that the following strategies have some evidence of effectiveness[1]:

- "Interventions facilitating access to research evidence, for example through communication strategies and evidence repositories, conditional on the

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[1] "cautious evidence' refers to reviews rated by the authors as having moderate trustworthiness and relevance. 'Reliable evidence' refers to those judged to have high trustworthiness and relevance.

intervention design simultaneously trying to enhance decision-makers' opportunity and motivation to use evidence (reliable evidence).

- Interventions building decision-makers' skills to access and make sense of evidence (such as critical appraisal training programmes), conditional on the intervention design simultaneously trying to enhance both capability and motivation to use research evidence (reliable evidence).
- Interventions that foster changes to decision-making structures and processes by formalising and embedding one or more of the other mechanisms of change within existing structures and processes (such as evidence-on-demand services integrating push, user-pull and exchange approaches) (cautious evidence)."

They also identified areas where there was evidence of no effects (p. 2):

- "Interventions that take a passive approach to communicating evidence that only provide opportunities to use evidence (such as simple dissemination tools) (reliable evidence).
- Multi-component interventions that take a passive approach to building EIDM skills (such as seminars and 'communities of practice' without active educational components) (cautious evidence).
- Skill-building interventions applied at a low intensity (such as a once-off, half a day capacity-building programme) (cautious evidence).
- Overall, unstructured interaction and collaboration between decision-makers and researchers tended to have a lower likelihood of success. However, clearly defined, light-touch approaches to facilitating interaction between researchers and decision-makers, ?and engagement in particular, were effective to increase intermediate CMO [capability, motivation, and opportunity] outcomes (cautious evidence)."

In the second stage of the review they argue that interventions and approaches which support the communication of and access to research evidence were only effective to increase evidence use if the intervention design simultaneously tried to enhance decision-makers' opportunity and motivation to use evidence. From the wider social science literature, they suggest the following as promising approaches (p. 2-4):

- Promote and market behavioural norms.
- Engage in advocacy and awareness raising for the concept of evidence-informed decision-making.
- Effectively frame and formulate communicated messages.
- Design appealing and user-friendly access platforms and resources.
- Build a professional identity with common practices and standards of conduct.

- Foster adult learning.
- Build organisational capacities and support organisational change.
- Use behavioural techniques, including nudges.
- Exploit the potential of online and mobile technologies.
- Institutional frameworks and mechanisms.

Overall, the synthesis focuses on research related to increasing use, but without evaluating the effectiveness of increased use. Although the review focus is broader than within education, schools and teachers were included.

An earlier review by NFER (Nelson and O'Beirne, 2014) was unable to identify many detailed examples of systematic evidence of use of knowledge mobilisation in education, despite systematic searching, and the authors argue that there is a key need for more research and analysis of the strategies that are being used to mobilise knowledge within and for the teaching profession. In particular, they highlight that there is little evaluation of the effectiveness of different approaches to mobilising knowledge or developing the use of research and evidence in schools. They were unable to find any evidence of impact on pupils' educational outcomes (see below for a summary of more recent studies). However, they also argue that it is important to understand the relative benefits, or the conditions for effectiveness, of different types of approach in order to achieve some degree of comparative understanding across the different approaches. They indicate (p. 21) that some of the issues relate to the supply side or production of research in that research evidence can be:

(1) Poor quality
- Failing to build on previous knowledge
- Too small scale
- Too poor to be replicable

(2) Insufficiently contextualised and/or inaccessible
- Not related to everyday practice in schools
- Relate to researchers' concerns and not schools
- Have inaccessible language
- Piecemeal, so hard to see the big picture

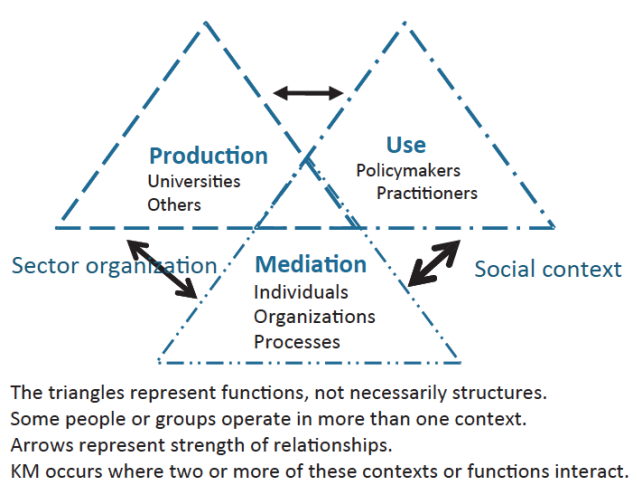(3) Insufficiently supportive of implementation
- Poor engagement with non-academics
- Unsupported engagement
- Flawed interpretation of findings

Their review draws on Becheikh et al.'s (2009) synthesis of models with a six-step knowledge transfer process going from the generation of knowledge by researchers to its utilisation by users. These steps are knowledge generation, adaptation, dissemination, reception, adoption and utilisation. The three first steps are commonly attributed to researchers, whereas the other three steps concern the users. Whilst

these stages may be helpful in conceptualising aspects of the stages of the process this is a somewhat problematic model as it assumes a one-directional model of knowledge mobilisation and that researchers' concerns and motivations for engaging in research are aligned with practitioners concerns and needs. As Goldacre (2013) and Hargreaves (1996) have previously argued, an alignment of research and practice is needed earlier in the knowledge mobilisation process, otherwise the responsibility is placed entirely on the practitioners as needing to change and develop, based on a deficit model of practice.

Levin's (2013) model, by contrast, conceptualises these as inter-related processes.

Figure 1: Levin's (2013) model of knowledge mobilisation structures

The triangles represent functions, not necessarily structures.
Some people or groups operate in more than one context.
Arrows represent strength of relationships.
KM occurs where two or more of these contexts or functions interact.

Dagenais et al.'s (2012) systematic and comprehensive review of the determinants of use of research-based information by school practitioners classified research use as *general* or *local* and identified the following features from the studies they reviewed in terms of the characteristics of the research, the communication processes, the practitioners and the schools involved. The team argue that these dimensions are central to understanding the factors that affect practitioners' decisions to become involved in change processes connected with evidence use and that also help to sustain their involvement in order to develop professional performance.

Table 1 Research characteristics (adapted from Dagenais et al. 2014)

Research Characteristics	Characteristics of communication	Practitioners' characteristics	School characteristics
Accessible and timely	Facilities	Skills and competencies	Enjoys external support
Objective and true	Access to research and data	Prior participation in research	Wants evidence for decision making
Easy to	Quality	Attitudes towards	Encourages and

Research Characteristics	Characteristics of communication	Practitioners' characteristics	School characteristics
understand and implement		research	supports initiative
Connected to school/classroom context	Collegial discussions	Willingness to innovate	Has prior experience with initiatives
Relevant	Collaboration with researchers	Self-efficacy and commitment	Staff capacity and support to use research
	Sustained collaboration via networks and partnerships	Experience	Encourages internal collaboration
	Media	Prior coursework in research methods	Prioritises appropriate professional development activities
		Content area taught	Needs innovation
		Training on how to make use of research	Is committed to organisational learning
		Involvement in research	Allocates time and resources, including available technology

Source: Dagenais et al. (2014, p. 297-299)

2.2 Research characteristics

Dagenais et al's (2014) characteristics represent practitioners' perceptions of the relevance of the evidence to their practice and these drive practitioners' decisions about research use. These characteristics also relate directly to the supply side issues identified by Nelson and O'Beirne (2014). However, the extent to which people's perceptions affect action can be considerable. Dagenais et al. (2008) found that, among various factors, practitioners' opinions about research emerged as the strongest predictor of their use of research-based information. Other features identified as important include clarity, timeliness, relevance, usability, amenability of research to action/transfer, applicability and sophistication in terms of how well the research-based information aligns with classroom needs and local contexts (Dagenais et al. 2014, p 299-300).

Teachers value research when it matches their professional experience and can be translated into tangible and practical outcomes in terms of classroom practice, interaction with pupils and/or specific methods or techniques for classroom instruction. Access to research and evidence still remains an issue as teachers prefer information that is readily accessible and applicable to their context (for more about practitioner perspectives see Williams and Coles, 2003; 2007) and which

makes minimal demands on time, and does not require special knowledge or search skills (see Higgins and Katsipataki, 2016, for a discussion of the tension between accessibility and accuracy of research findings). When teachers actively seek out research they tend to do so with a specific issue or question in mind (Drill et al. 2009).

2.3 Characteristics of communication processes

Communication processes in terms of relationships between researchers and potential users are also important (Dagenais et al. 2012). Interaction between researchers and practitioners has been reported as ensuring more relevant and contextualised research results which can increase both the relevance of the research to the practitioners and, consequently, the likelihood that they will use it. Networks and partnerships are therefore likely to support the effective use of research and being part of such a network supports practitioners in developing a sense of ownership and a positive attitude with regard to the research products (see also: McLaughlin et al. 2004; Gu et al. 2014). Direct involvement in the research process also tended to increase research use. The choice of media for the communication of research-based information emerged as an important determinant of use with the internet and online access replacing print over the last decade (Dagenais et al. 2012, p 300-103: see also Procter, 2013 and Blamires, 2015 for some of the challenges in developing effective online dissemination).

2.4 Practitioners' characteristics

Evidence use is also influenced by characteristics of the individuals involved (Dagenais et al., 2014). Williams and Coles (2003; 2007) reported that the overall beneficial impact of research on practice could be improved by greater knowledge and understanding about the products of research. An individual's capacity to use evidence to inform their practice and the skills needed to do so are therefore important prerequisites for practitioner engagement with educational research. This skill set includes, but is not limited to, the ability to formulate questions about problems encountered in practice and the ability to find solutions by locating research, appraising it critically, inferring from data, applying findings to practice and conducting one's own research projects (see also Drill et al. 2009). Teachers' capability to interpret educational research in relation to their own context is therefore central. Practitioners' motivation to use evidence from research and their engagement with this process is influenced by a number of individual variables, including self-efficacy and commitment, their prior involvement in research, any previous research training and the length of their experience (Dagenais et al. 2014, p 301).

2.5 School characteristics

The organisation, its structure and culture, particularly procedures and incentive systems, all contribute to a school's capacity to learn from research and evidence. Aspects of leadership, such as openness to initiatives for change, support for collaboration and collegiality, providing time and appropriate resources (including technology) as well prioritising professional development of the teaching staff, are all indicated as important (see also Maxwell et al. 2015). The school's need for innovation and evidence-based decision-making appear to be the critical prerequisites. But for a school to succeed, two elements also appear vital: prior experience with initiatives and staff capacity to deal with the change. Because schools are embedded in a larger system, any engagement in the use of research-based evidence can be affected by a number of system-related factors, including political concerns, public opinion, and resources and funding (Dagenais et al. 2012, p 300-103).

2.6 The process of teachers' engagement with evidence

What becomes clear from the analysis of these reviews is the importance of the processes by which teachers engage with or become engaged with research and evidence. This needs to be understood in the light of Levin's model of the interconnected nature of aspects involved in knowledge mobilisation, or perhaps understood as ecology of knowledge and evidence.
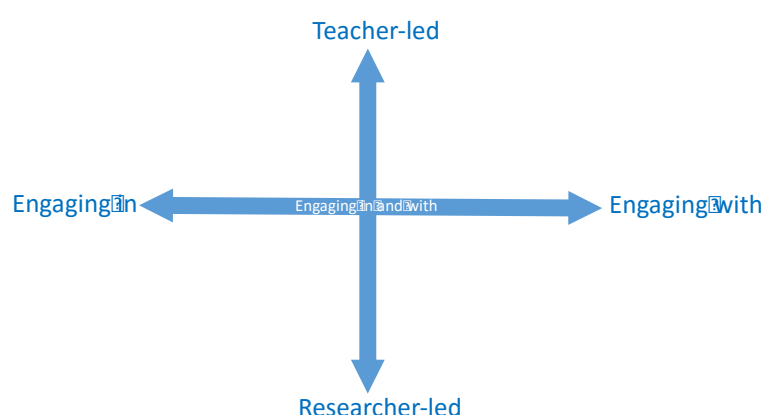
2.6.1 The role of professional development

Cordingley's (2013) review summarises findings from several systematic research reviews about the contribution of research to effective continuing professional development (CPD) and the impact of these activities on teachers' professional learning and educational outcomes for pupils. It therefore presents a perspective on evidence-based teaching through the lens of professional development and learning. It starts with a review of how teachers engage in and with research as part of CPD (see Figure 2 below), how teachers and researchers shape professional learning activities and then identifies key processes linked to positive outcomes for teachers and learners. Finally, it also discusses how different contributions from research and evidence can be developed to make a more explicit contribution to CPD. The review maps studies in relation to two dimensions. These are (1) teachers engaging in and/or with research and (2) the extent to which the research is researcher-led or teacher-led and conceptualises these as key variables in understanding impact.

Cordingley argues for the importance of structured peer support for teachers, professional dialogue and the development of more proactive approaches to professional learning. She highlights the importance of CPD facilitators, including

researchers, in developing the growing independence of teachers in engaging in and with research (Cordingley, 2013, p. 9). Cordingley also highlights some of the inherent challenges in the relationship between practice and evidence from empirical studies. Systematic reviews, for example, work to different timescales from practice. Evidence necessarily lags behind policy and practice and often the immediate interests of teachers. The importance of the role of research evidence in continuing professional development and learning for teachers is also picked up in Cordingley and colleagues' more recent review for the Teacher Development Trust (Cordingley et al. 2015; see also Maxwell et al. 2015 for a perspective from Teaching School Alliances).

Figure 2: Cordingley's (2013) map of teachers' engagement in and with research

Leat et al.'s (2014) review of teachers' perspectives on research engagement adds a further note of caution and an additional dimension to Cordingley's map. They focus on teachers' points of view in relation to engagement in and with research and conclude it is somewhat elusive in the literature. They note that teachers are usually positive towards their research engagement, particularly so when this is a practitioner undertaking research into their own practice. They highlight McLaughlin et al.'s (2004, p.7) distinction that there are three purposes evident in the teacher research tradition: (1) research and enquiry undertaken for primarily personal purposes; (2) research and enquiry undertaken for primarily political purposes; and (3) research and enquiry undertaken for primarily school improvement purposes. But they note that these are interconnected and often not easily distinguishable. The consequence, they argue, is that there is a bias in the literature that over-represents the traditions of school improvement and tested pupil outcomes, whilst neglecting teachers' concerns about curriculum and pedagogy and their professional values underpinning these.

Hemsley-Brown and Sharp (2003) identify differences in the way that research knowledge is constructed in the social sciences and the contestability of research findings particularly in relation to the context, generalisability and validity of the

research. As a result, they argue that the development of communication networks, links between researchers and practitioners, and greater involvement of practitioners in the research process, have emerged as strategies for improving research uptake.

The challenge with these perspectives is that they elide some of the complexity of the issues in the different stages of the process, which starts with access and awareness and implies a linear process through to engagement and use. These reviews describe aspects of this process, but only partially and without a coherent model of, or logic for, evidence-based practice in terms of its impact on outcomes for learners. We can conclude from the reviews that simple linear models are too limited to capture the range of ways that research evidence may support improvement in learning outcomes and that we understand the importance of some key steps, particularly the relationship between awareness, access and engagement. One key assumption is that informed and deliberate research is necessary, but may not be sufficient to bring about improvement. However, it is not clear that this is always necessary. It is clearly desirable for a model which seeks to develop the professionalism and expertise of teachers in terms of improving their knowledge of and therefore the sophistication of their choices about how to address the current learning needs of their students effectively, but the extent to which practitioners need to understand the robustness of the underpinning research is not clear. It seems likely that a range of approaches is needed. In some areas, it may be possible to develop research-based guidelines which have a good chance to support improvement and which are sufficiently specific and applicable to be of benefit. In other areas, the match of specific findings to the teaching and learning context will be more complicated and will depend on effective diagnosis of the problem which can be helped by research. Even here the answer may not be simple. Evidence may indicate that a change in pedagogy, perhaps about the quality of feedback, is likely to improve learning outcomes, *on average*. For this to be successful it needs to improve the quality of feedback in a particular teacher's classroom (i.e. enhance their skills), for particular pupils (who were previously not receiving feedback which was as effective) and in a specific area of the curriculum (such as aspects of their writing). The recontextualisation of the research is often overlooked (see Brown & Rogers, 2015 and Sheard & Sharples, 2016 for the importance of this dimension).

A second assumption which is often implicit is that *all* research will help *all* teachers and that research use necessarily guarantees improvement. This is clearly unwarranted and it seems more likely that *some* research will help *some* teachers, with the challenge being to identify *which* research *will* help *which* teachers, and in *which* contexts and professional circumstances. Large-scale randomised trials generate evidence about what was effective, on average, compared with what was happening in the comparison classes, on average. Observational studies identify the typical development of learners or the typical associations with other covariates. This

is not a trivial point. The more effective a teacher or school, the less likely that 'average' gains will help to bring about improvement. This limits how effective evidence use is likely to be and argues for an expertise model of evidence use to improve informed decision-making by practitioners.

3. Recent studies of evidence use in schools

3.1 Introduction

The development of evidence-based approaches in schools reflects an international trend towards evidence-based approaches which has been gaining momentum over the past ten years, particularly from a policy perspective. Universities are now judged on the impact of their research, and the development of digital technologies has increased the availability of and access to educational research findings, increasing the supply. In the UK, it has also been supported by practitioners through initiatives like ResearchED (Bennett, 2015) which has increased the demand for research and evidence. A number of research studies and evaluations of evidence-based approaches in schools have been completed since Dagenais and colleagues' (2012) review and Nelson and O'Beirne's (2014) systematic review. These are summarised in the section below. The inclusion criteria identified studies which looked for and/or collected evidence (whether they found it or not) of changed teacher behaviours and/or pupil learning outcomes as a result of EBP.

The Education Endowment Foundation (EEF) was established in 2011 with a £125 million endowment from the UK Government. It invests in evidence-based projects which focus on tackling the attainment gap for disadvantaged pupils. It draws on evidence summarised in their online 'Teaching and Learning Toolkit' to test research-based ideas rigorously in English schools (over 7,500 schools to date, involving 750,000 pupils). The findings from independent evaluations of these projects are then fed back into the Toolkit to update it, disseminated and, where successful, used to design campaigns to promote evidence-based approaches in schools. Sixty research reports have been published up to August 2016 with a further 67 projects underway.

In 2014, the EEF committed £1.5 million to five projects to explore the impact of research use in schools, evaluated through impact on pupils' attainment. So far two of these have reported (Speight et al. 2016), with three due to report in Autumn 2017 and a further project commissioned into the use of research tools to support literacy in the early years. Early indications suggest that although these approaches to promote research use may have promise, particularly in terms of developing awareness and engagement, it is challenging to demonstrate a causal link between evidence use and improved outcomes (Speight et al. 2016). As Langer, Tripney and

Gough (2016) noted in their review, we still lack evidence on the relative effectiveness of different approaches. There is some evidence that simpler and more defined interventions have an increased likelihood of impact (e.g. Levin et al. 2011) so in the short term, research which improves our understanding of simple causal mechanisms, like the EEF research-use projects, may help to design larger studies of more complex interventions "whose causal chain is difficult to disentangle at this early stage of research knowledge" (Langer, Tripney & Gough, 2016, p. 4).

A number of other recent reports of evidence use relate directly to policy initiatives. The National College for Teaching and Leadership (NCTL), an executive agency of the Department for Education (DfE), commissioned a series of projects to support the development of aspects of a school-led system. One of these, "Closing the gap: test and learn" trialled seven evidence-based interventions simultaneously using a collaborative approach across clusters of schools, led by teaching school alliances. It was commissioned as an extended partnership involving CfBT Education Trust[2] Centre for the Use of Research and Evidence in Education (CUREE), Oxford and Durham Universities (Churches, 2016)[3]. In the first year, 387 schools took part in the trials (15,292 pupils). In the second year, 286 schools (5,530 pupils) took part in the collaborative trials. In the second year of the project a group of 50 teachers were also trained to conduct micro-trials to test hypotheses about the effects of a range of teaching and learning approaches in their classrooms which they identified as professionally valuable, similar to the model used by Coe, Fitzgibbon and Tymms (2000). A number of the aims of the project relate to engagement in research, the use of robust evidence to improve pupil outcomes and a broader aim to complement work by the Education Endowment Foundation (EEF) and other efforts to develop an evidence-informed teaching profession (p. 13). The findings indicate that schools have the capacity to engage with and in research-based improvement initiatives, to take the lead on aspects of research management and implementation, and that improvement in attainment from system-led research approaches is possible, but not guaranteed.

Two other recent NCTL projects are relevant to the development of EBT: "Approaches to research and development for 'great pedagogy' and 'great CPD' in teaching school alliances" (Maxwell et al. 2015) and "Teaching Schools Evaluation: Emerging issues from the Early Development of Case Study Teaching School alliances" (Gu et al. 2014). Although not evaluating the impact of EBT initiatives

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[2] Now the Education Development Trust.
[3] Another NCTL project "Evidence-based teaching: advancing capability and capacity for enquiry in schools" is reporting in 2017. Twenty teaching school alliances are working with Manchester Metropolitan University to identify which approaches to supporting evidence-based teaching (EBT) have the most impact on TSAs. The project looks specifically at developing staff capability and capacity, and under what conditions. An interim report (Hammersley-Fletcher et al. 2015) reporting on the approach and baseline survey findings is available.

directly, they highlight the importance of effectively embedding research, development and evidence-based practice at school level and indicate the importance of leadership and the role of continuing professional development and teachers' learning in successful uptake.

3.2 School-university partnerships

Another strand of the development of EBT is through school-university partnerships. These have a longer history of reflecting relationships between researchers and teachers with the view to developing practice and applying research findings from earlier studies. Partnerships between universities and schools with a research focus have changed from informal contacts to support and apply individuals' research, or supporting research teams with their own research, to more organised approaches to support schools and school networks more systematically to bring about improved teaching and learning (Coburn et al. 2013).

Recent work in the UK highlights a number of these challenges, but also illustrates the potential of such partnerships. Brown and Rogers (2015) used a knowledge creation activity as a way of developing evidence-informed practice amongst a learning community of 36 early years practitioners in London and identified evidence of whether practitioners were developing expertise as evidence users (p.190). The findings suggest that knowledge creation activity provides an effective way of communicating research and developing practitioners' professional skills.

Cain's (2015) small scale study of evidence use by eight teachers in one secondary school further exemplifies the challenge of identifying and using applicable findings from research. Teachers were given research findings about teaching gifted and talented students, and were supported, over a 12-month period, to incorporate findings into action research projects of their own devising. Findings suggest that teachers developed propositional knowledge into practical knowledge by interpreting the research in the light of their own context and experience, but that in the process this changed the nature of that knowledge.
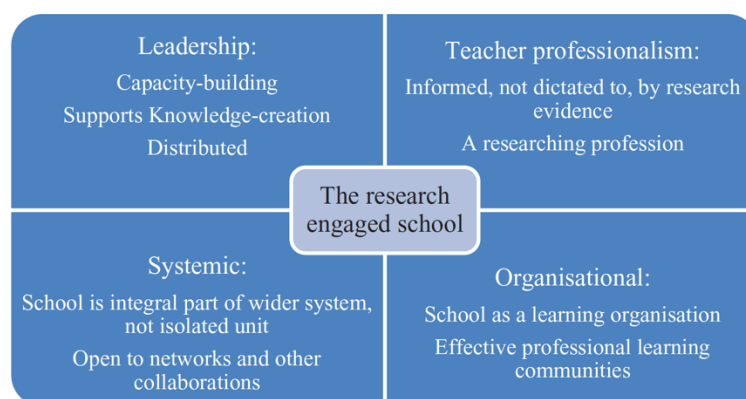
Sheard and Sharples (2016) evaluated the effectiveness of a five-stage process of engagement with evidence-based programmes and practices as a management tool for school leaders to address their schools' improvement agendas. The findings describe the change process in three primary schools over a one-year period and the enablers and constraints associated with the concept of evidence-based practice as a driver for change in teaching and learning. The role of the enquiry, where practitioners and researchers are equal partners in the learning process, is discussed and the relevance of this to managing school improvement through research use rather than direct application.

Internationally, Ecalle and colleagues (2015) report the findings of a large scale randomised controlled trial in France involving 3560 children using evidence-based literacy practices. There were significant gains in the target domains. In a randomised controlled trial with 3569 kindergarten children, evidence-based literacy practices (EBLP) were proposed by teachers to an experimental group (EG). A control group did not receive any specific interventions during the same period. The EBLP related to the alphabetic code, phonological awareness and oral comprehension. Analyses based on propensity scores showed significant gains in the targeted domains and in pseudo-word reading in EG after comparison between the two groups. The gains were higher for children who had the lowest scores. However, no effect was observed in word reading and vocabulary. EBLP could be a valuable pedagogical tool.

3.3 A complex ecology

Overall the range of approaches, models and descriptive studies makes it challenging to summarise and define what evidence-based approaches are, so drawing conclusions about effective approaches is even more difficult. Perhaps the most helpful perspective is to consider it as a system with its own ecology (Godfrey, 2016) in which effectiveness can be evaluated once the aims and purpose are clear, but from which any more general conclusions need to be tempered by the contexts from which they are drawn (see Figure 3).

Figure 3: Godfrey's (2016) ecological model of a research-engaged school 'culture'

4. Summary

Evidence is a contested term and the relationship between research and practice is complex. Clarity is therefore needed in understanding what people mean by the terms involved. This is particularly about the nature of the evidence and the kinds of research which support evidence use by teachers.

Evidence can be used in very different ways. This ranges from seeking to replicate faithfully the behaviours or practices which were shown to be causally linked with improved outcomes, through more interpretive re-application of research-based principles and practices seeking to achieve the intended outcomes from previous research, to broader, more creative research-inspired approaches. The research-practice divide has traditionally been seen as a unidirectional model, with evidence flowing from research to practice. More recent work has identified the importance of seeing this as a reciprocal relationship with questions arising from practice and research knowledge being developed in professional contexts, as well as research being able to inform practice-driven concerns. Research brokerage therefore remains an important challenge, as identifying specific and robust research which might address the needs of a particular school, teacher or pupil is challenging, even for experts in the research community. This highlights the importance of relationships and processes.

The knowledge base about teachers' awareness, engagement and use of research is developing rapidly, in a similar way to developments in other professional fields. The knowledge base draws on research about evidence-informed decision-making in other fields, particularly medicine and health-related professions, but also increasingly in education. Wider social science knowledge about organisational and individual behavioural change could usefully inform approaches in education. However, the available research about the effects of evidence-based teaching is still limited and relies mainly on descriptive accounts and opinions, often about evidence use in optimal circumstances. Caution is therefore needed in interpreting this information in terms of wider uptake. There are only a few studies which have sought to link evidence use with changes in teachers' practice and fewer still which robustly establish a link between evidence use and improved outcomes for learners in an organisational setting. We still know relatively little about the *effects* of evidence-based approaches on schools, teachers and pupils, and how to increase the likelihood of better outcomes for learners in particular. This highlights the importance of a practice and professional focus, which includes an organisational dimension.

In terms of current research in education, there is a tension between research that aims to demonstrate a link (such as through controlled trials of evidence use) which inevitably simplifies the complexity of interpreting; and applying evidence from one educational context to another setting which tends to seek general rather than specific approaches for improvement. In practice, research is rarely 'applied' in a linear way by teachers or schools: research implications are unlikely to be clear-cut and must be contextualised and combined with practice-based knowledge as part of a wider professional learning process. There is no consistent logic model or theory of the way or ways in which evidence-based practice might lead to more effective teaching and learning. Some assumptions about the likelihood of benefit may limit

the applicability of findings from current studies. This highlights the importance of a research focus in developing evidence-based teaching.

Strategies and structures to support the development of evidence-based teaching need to be multi-dimensional and are likely to include features related to (1) the nature of the research and evidence itself, (2) effective communication processes whilst taking into account variation in (3) teachers' needs, experience and skills as well as (4) the characteristics of the school contexts in which they work so as to increase the probability of benefit from evidence for improved outcomes for learners. This highlights the importance of understanding the wider context, which is often implicit or even hidden in the existing reviews, which seek to identify common features and patterns across contexts.

References

Admiraal, W., Buijs, M., Claessens, W., Honing, T. & Karkdijk. J. (2016) Linking theory and practice: teacher research in history and geography classrooms. *Educational Action Research*: 1-16. http://dx.doi.org/10.1080/09650792.2016.1152904

Becheikh, N., Ziam, S., Idrissi, O., Castonguay, Y. & Landry, R. (2010). How to improve knowledge transfer strategies and practices in education? Answers from a systematic literature review. *Higher Education Journal*, 1-21.

Bell, M., Cordingley, P., Isham. C. & Davis, R. (2010) *Report of Professional Practitioner Use of Research Review: Practitioner engagement in and/or with research*. Coventry: CUREE, GTCE, LSIS & NTRP.

Bennett, T. (2015) The Polite Revolution in Research and Education. In J. Evers & R. Kneyber (Eds) *Flip the System: Changing Education from the Ground Up*, pp 250-257. London: Routledge.

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

Blamires, M. (2015) Building portals for evidence-informed education: lessons from the dead. A case study of the development of a national portal intended to enhance evidence informed professionalism in education. *Journal of Education for Teaching,* 41(5), 597-607. http://dx.doi.org/10.1080/02607476.2015.1105532

Brown, C. & Rogers, S. (2015) Measuring the effectiveness of knowledge creation activity as a means to facilitate evidence-informed practice: a study of early years settings in Camden, London. *Evidence & Policy: A Journal of Research, Debate and Practice,* 11(2), 189-207. http://dx.doi.org/10.1332/174426414X14175432147396

Cain, T. (2015) Teachers' engagement with published research: addressing the knowledge problem. The Curriculum Journal, 26(3), 488-509. http://dx.doi.org/10.1080/09585176.2015.1020820

Churches, R. (2016) *Closing the gap: test and learn* (Research report DFE-RR500b) Nottingham: National College for Teaching & Leadership.

Coburn, C. E., Penuel, W. R. & Geil, K. E. (2013) *Research-practice partnerships: A strategy for leveraging research for educational improvement in school districts.* William T. Grant Foundation, New York, NY.

Coe, R., Fitz-Gibbon, C. & Tymms, P. (2000, September). Promoting evidence-based education: The role of practitioners. In Roundtable presentation to the British Educational Research Association's Annual Conference, Cardiff, Wales, September 2000 (pp. 7-9).

Cordingley, P. (2013) *The Contribution of Research to Teachers' Professional Learning and Development. Research and Teacher Education: the BERA-RSA Inquiry*. London: BERA.

Cordingley, P., Higgins, S., Greany, T., Buckler, N., Coles-Jordan, D., Crisp, B., Saunders, L. and Coe, R. (2015) *'Developing great teaching: lessons from the international reviews into effective professional development.'*, Project Report. Teacher Development Trust, London.

Dagenais, C., Abrami, P., Bernard, R., Janosz, M. & Lysenko, L. (2008) *Integrating research-based information into the professional practices by teachers and school administrators: Towards a knowledge transfer model adapted to the educational environment*. Ottawa: Canadian Council on Learning.

Dagenais, C., Lysenko, L., Abrami, P. C., Bernard, R. M., Ramde, J. & Janosz, M. (2012) Use of research-based information by school practitioners and determinants of use: a review of empirical research. *Evidence & Policy: A Journal of Research, Debate and Practice*, 8(3), 285-309.

Davies, H.T.O., Nutley, S.M. & Walter, I. (2005) *Approaches to assessing research impact: Report of the ESRC symposium on assessing the non-academic impact of research.* St Andrews: Research Unit for Research Utilisation, School of Management, University of St Andrews.

Dimmock, C. (2016) Conceptualising the research–practice–professional development nexus: mobilising schools as 'research-engaged' professional learning communities. *Professional Development in Education*, 42(1), 36-53. http://dx.doi.org/10.1080/19415257.2014.963884

Drill, K., Miller, S. & Behrstock-Sherratt, E. (2012) *Teachers' Perspectives on Educational Research* American Institutes for Research. Napierville, IL. http://files.eric.ed.gov/fulltext/ED530742.pdf

Ecalle, J., Labat, H., Le Cam, M., Rocher, T., Cros, L. & Magnan, A. (2015) Evidence-based practices to stimulate emergent literacy skills in kindergarten in France: A large-scale study. *Teaching and Teacher Education,* 50, 102-113.

Godfrey, D. (2016) Leadership of schools as research-led organisations in the English educational environment Cultivating a research-engaged school culture. *Educational Management Administration & Leadership*, 44(2), 301-321.

Gu, Q., Rea, S., Hill, R., Smethem, L. & Dunford, J. (2014) *Teaching Schools Evaluation: Emerging issues from the Early Development of Case Study Teaching School alliances* Nottingham: NCTL.

Hammersley-Fletcher, L., Lewin, C., Davies, C., Duggan, J., Rowley, H. & Spink, E. (2015) *Evidence-based teaching: advancing capability and capacity for enquiry in schools: interim report.* Nottingham: National College for teaching & Leadership.

Hargreaves, D. (1996) *Teaching as a Research-Based Profession: possibilities and prospects.* Teacher Training Agency Annual Lecture (London, Teacher Training Agency).

Hemsley-Brown, J. & Sharp, C. (2003) The use of research to improve professional practice: A systematic review of the literature. *Oxford Review of Education*, 29(4), 449-471.

Higgins, S. & Katsipataki, M. (2016) Communicating comparative findings from meta-analysis in educational research: some examples and suggestions. *International Journal of Research & Method in Education*, 39(3), 237-254.

Langer, L., Tripney, J. & Gough, D. (2016) *The Science of Using Science: Researching the Use of Research Evidence in Decision-Making*. London: EPPI-Centre, Social Science Research Unit, UCL Institute of Education, University College London.

Leat, D., Lofthouse, R. & Reid, A. (2014) *Teachers' views: Perspectives On Research Engagement. Research and Teacher Education*: The BERA-RSA Inquiry British Educational Research Association.

Levin, B. (2013) To know is not enough: research knowledge and its use. *Review of Education,* 1(1), 2-31.

Levin, B., Cooper, A., Arjomand, S. & Thompson, K. (2011) Can Simple Interventions Increase Research Use in Secondary Schools? *Canadian Journal of Educational Administration and Policy,* 126(5).

Mahoney, S. (2013) *Educational Research in the United States: A Survey of Pre-K-12 Teachers' Perceptions Regarding the Purpose, Conceptions, Use, Impact, and Dissemination* (Doctoral dissertation, Arizona State University).

Marsh, J. A. (2012) Interventions promoting educators' use of data: Research insights and gaps. *Teachers College Record*, *114*(11), 1-48.

Maxwell, B., Greany, T., Aspinwall, K., Handscomb, G., Seleznyov, S. & Simkins, T. (2015) *Approaches to research and development for 'great pedagogy' and 'great CPD' in teaching school alliances* Nottingham: NCTL

McLaughlin, C., Black-Hawkins, K. & McIntyre, D. (2004) *Researching Teachers, Researching Schools, Researching Networks: A Summary of the Literature.* Cambridge: University of Cambridge.

Mitton, C., Adair, C.E., McKenzie, E., Patten, S.B. & Waye Perry, B. (2007) 'Knowledge transfer and exchange: review and synthesis of the literature', *Milbank Quarterly*, 85 (4): 729–68.

Nelson, J. & O'Beirne, C. (2014) *Using evidence in the classroom: What works and why*. Slough: NFER.

Nutley, S., Walter, I. & Davies, H. T. (2009) Promoting evidence-based practice models and mechanisms from cross-sector review. *Research on Social Work Practice*, 19(5), 552-559.

Nutley, S.M., Walter, I. & Davies, H.T. (2003) 'From knowing to doing: a framework for understanding the evidence-into-practice agenda'. *Evaluation: The International Journal of Theory, Research and Practice, 9* (2): 125–48.

Nutley, S.M., Walter, I. & Davies, H.T.O. (2007) *Using evidence: How research can inform public services.* The Bristol: Policy Press.

Sheard, M. K. & Sharples, J. (2015) School Leaders' Engagement with the Concept of Evidence-based Practice as a Management Tool for School Improvement. *Educational Management Administration & Leadership,* 44(4), 668–687. http://dx.doi.org/10.1177/1741143215580138

Slavin, R. E. (2002). Evidence-based education policies: Transforming educational practice and research. *Educational Researcher*, 31(7), 15-21.

Speight, S., Callanan, M., Griggs, J. & Farias, J. (2016) Rochdale Research into Practice: Evaluation report and executive summary London: EEF.

Appendix 2: Content analysis detailed findings

The *Content Analysis* examined the websites of a selection of Teaching Schools that had received funding for R&D (Research and Development) as well as a random selection of schools over a two-year period. Analysing website content and the key documents included on these sites, such as school and Pupil Premium improvement plans, can provide a strong indication of the values, priorities and ways of working for a particular school or Teaching School Alliance. Of course, it is possible that some schools and Teaching Schools might value EBT in practice, but not choose to actively highlight that on their website, especially where the site is aimed primarily at a parent and Ofsted audience, rather than other schools. This strand of the content analysis is therefore seen as indicative only and should be read alongside the wider evaluation findings.

In Section 3.2.2 of the main report we have included the findings from the content analysis of the websites of the 15 case study schools alongside the detailed qualitative findings, in order to show how they compare with the random sample and Teaching Schools discussed in this section.

Tables 2 and 4 below give the percentages of Teaching Schools (Table 2) and randomly-selected schools (Table 4) scoring High, Medium, Low or None in each of the five areas assessed in year two of the evaluation. These were:

- Exhibits awareness of research use as part of teaching.
- Recognises the value of quality evidence.
- Promotes why it should be used.
- Promotes how evidence should/could be used.
- Promoting evaluation – how impact of use is assessed.

Tables 3 and 5 show the percentage change in each area between the first and second years of the evaluation for each group.

A number of overall findings stand out:

Teaching Schools appear more engaged than other schools

As a group, Teaching Schools score higher in all five areas than the randomly selected group. In addition, the second year analysis indicates that greater numbers of Teaching Schools are demonstrating a commitment to evidence use on their websites over time.

Teaching Schools score relatively highly in terms of 'Exhibiting awareness of research use as part of teaching' (43% scored high or medium), 'Promoting why evidence should be used' (50% - up from 29% in Year 1) and 'Promoting how evidence should/could be used' (54% scored high or medium). Teaching Schools scored lower on 'Recognises the value of quality evidence' (11% high or medium) and 'Promoting evaluation – how impact of use is assessed' (11% high or medium), although both areas had improved from Year 1.

The documents accessed from the highest scoring Teaching School websites indicate that EBT is typically linked to school improvement and CPD and training activity. In exemplar Teaching Schools:

a. there is engagement in a significant range of local, national and international projects, including with the EEF, organisations such as SSAT and CfBT/EDT, and HEI partners;
b. schools often follow a clearly articulated cycle of research, action and evaluation;
c. specific roles are often allocated to research brokers within schools, and these roles are viewed as central to the school becoming research engaged;
d. bursaries for research projects are offered in two of the high scoring randomly selected schools; and
e. there are extensive EBT-related professional learning opportunities for staff.

However:

Many Teaching Schools appear not to be promoting or modelling use of research evidence

Significant proportions of Teaching Schools (between a third and four-fifths across the five areas) are not promoting or modelling the use of evidence at all on their websites. The two areas where Teaching Schools score lowest are 'Recognising the value of quality evidence' (82% None) and 'Promoting evaluation – how impact of use is assessed' (80% None), perhaps suggesting that Teaching Schools may need more support to develop these more challenging aspects of knowledge mobilisation.

Furthermore:

The vast majority of randomly selected school websites displayed no engagement with evidence.[4]

Moreover, this picture did not change between Years 1 and 2 of the study.[5] The only area where the randomly selected school websites score slightly higher is 'Promotes how evidence should/could be used', where one in ten websites are scored Medium.

Table 2 Overall findings for Teaching Schools (%)

Score	Exhibits awareness of research use as part of teaching	Recognises the value of quality evidence	Promotes why it should be used	Promotes how evidence should/could be used	Promoting evaluation – how impact of use is assessed
High	17%	0%	15%	28%	1%
Medium	26%	11%	35%	26%	10%
Low	26%	5%	6%	13%	7%
None	30%	82%	43%	32%	80%
Total	100%	100%	100%	100%	100%

Table 3 Teaching Schools: Difference between year 1 and year 2 scores (%)

	Exhibits awareness of research use as part of teaching	Recognises the value of quality evidence	Promotes why it should be used	Promotes how evidence should/could be used	Promoting evaluation – how impact of use is assessed
High or medium	-2%	7%	21%	1%	1%
Low	8%	5%	6%	13%	7%
None	-8%	-14%	-28%	-16%	-10%

[4] The highest scoring schools from the random selection are actually Teaching Schools, since these were not excluded from the selection.

[5] The variations in score here should not be regarded as significant. One of the two website assessors changed between Years 1 and 2 of the evaluation, possibly introducing differences in inter-rater reliability despite efforts to mitigate this risk.

Table 4 Overall findings for Random Selection of Schools (%)

Score	Exhibits awareness of research use as part of teaching	Recognises the value of quality evidence	Promotes why it should be used	Promotes how evidence should/could be used	Promoting evaluation – how impact of use is assessed
High	2%	0%	0%	0%	0%
Medium	1%	0%	2%	10%	2%
Low/None	96%	99%	97%	89%	97%
Total	100%	100%	100%	100%	100%

Table 5 Randomly selected schools: Difference between year 1 and year 2 scores (%)

	Exhibits awareness of research use as part of teaching	Recognises the value of quality evidence	Promotes why it should be used	Promotes how evidence should/could be used	Promoting evaluation – how impact of use is assessed
High or medium	-1%	0%	-2%	-2%	1%
Low/none	0%	-1%	1%	3%	-2%

Appendix 3: Research tools

3.1 Year 1 Research Tools

Evidence-based teaching: Draft EBT Panel Interview Schedule: Head/Senior leader

1. Introduction

Thank you for agreeing to be part of our EBT panel. This interview is part of an evaluation, commissioned by the Department for Education (DfE), that aims to make an assessment of progress towards a system within which the teaching profession can improve practice through the rigorous use of robust evidence. The research is being undertaken by independent researchers at the Centre for Education and Inclusion Research at Sheffield Hallam University, with colleagues at Durham University and the Institute of Education, London.

From all the schools volunteering to take part in the panel we have selected a range of schools with varying levels of current engagement in EBT and differing characteristics such as school phase and location. The data from the interview will be analysed together with data from other members of the teacher panel and presented in a report that will be available on the DfE website. We may also use the data in professional and academic publications. You will not be named in any publication.

Check consent - referring to information sheet/consent form -if consent not already provided by email.

Check permission to record.

2. About you and your school

NB Build on information from Survey Monkey/ data dashboard/ Ofsted report while asking these questions

1.1 Please describe the main characteristics of your school

> *Prompts:* size; age phase; catchment/pupil population; achievement; Ofsted, main priorities for improvement

> *Probe:* to establish if under particular pressures re Ofsted *{to see if this has any relationship with school approach to EBT}*

1.2 Tell me a little about yourself and your role:

> Role/ Number of years in role /at this school/ post degree qualifications and approximate dates - masters? / NPQH/ other?

3. 'Evidence' and 'evidence-based teaching'

{Establish the definition of evidence/ EBT being assumed in the following questions and beliefs about and attitudes towards EBT. This section also contains questions that relate to the engagement section of the matrix of engagement}

3.1 (E) Can you think about an aspect of the school's teaching and learning practices that you have been involved in changing in some way in the past year:

- What led you to making that change?
- In what ways (if any) did you draw on evidence in making that change?
  Probe: the role of evidence in informing that decision?/ what they are counting as evidence/ at what points evidence is seen to be useful/important e.g. to understand the problem, identify an innovation etc - for what purposes

  {Note: this question is intended to get a sense of the way in which the interviewee understands 'evidence' and evidence -based teaching - in a way that does not lead them to assumed 'desired answers'}

3.2 What do you understand 'evidence-based teaching' to be?

Probes: what counts as evidence and what doesn't? /how is EBT practised? / can/ in what ways can research impact on practice?

1. **'In the questions that follow we are using the term ' evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews -such as those produced by the Sutton Trust, EEF and John Hattie; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry.'**

3.3 (E) How important do you think it is to use evidence to inform teaching in your school?

Probe : why do you think it is important or why not? / what is it important for? / what is it not important for?/ how important compared to other ways of developing your practice? /

3.4 (E) If I had asked you how important evidence was two years ago would your answer have been the same?

- Follow -up-if changes - what has led to you changing your opinions on this?

3.5 (E) Is there any external research you have come across that has had a significant impact on your school? i.e. changed the way you/others think and/or act? if so, can you explain how and why it came to have a significant impact

Probe : why do you think this research had an impact on you? - e.g. what was it about your context, the research and/or you or other factors that led to this impact?

4. School approaches to EBT

4.1 (All) On a scale of 1-10 how well embedded do you think EBT is in the work of the school? Where 1 is not at all and 10 is fully embedded?

Probe: reasons for rating given

4.2 Does the school have any policies or guidelines on evidence-based teaching? -if so, what are the main strategies?

Probe: is it built into the school development plan in any way?

4.3 (All) What expectations (if any) are placed on teachers in the school to engage in EBT? / what are they expected to be doing?

Prompts

- *how many/what proportion of staff in what roles are expected to directly access evidence? - through what processes does this happen?*
- *in what ways are staff expected to use evidence in planning and delivering teaching?*
- *how many/ what proportion of staff are expected to engage in undertaking research - through what processes does this happen?*
- *how are these expectations communicated?-(e.g. school policy, championed by a senior leader, championed by interviewee, ,middle leader responsibility)*

4.4 (All) What structures, systems or processes support teachers in your school to implement EBT?

(e.g. evidence/research champions; JPD and research groups that engage with evidence; leadership/departmental/team meetings, agenda items that focus on evidence/ PD, middle leader roles, research advocates? time for teachers to engage with research? links with academics? research on websites; sponsor MAs; information for parents)

Professional development support?

Probe: how does this come about and frequency

4.5(All) What do you and other senior leaders do to promote and support EBT?

Prompts

- *advocate for EBT/ promoting/championing use?- how do you go about this?*
- *supporting middle leaders-in what ways /what do you do?*
- *other?*
Probe : what appears to be more or less effective in implementing EBT

4.6 (E) What (if anything) do you expect middle leaders to do to support teachers to engage in EBT?

- promoting EBT? / supporting teacher PD / leading evidence-based innovations etc.?/ all middle leaders or some middle leaders roles? -rationale for this?

5. Awareness

5.1 (A) How are teachers in your school made aware of relevant evidence?

Probe: who tells them -how?/ are they expected to find out about it themselves - through what processes?

5.2 (E) What (if any) guidance is given on assessing whether they can rely on the evidence they find?

Probe: what does the guidance say? Who gives this guidance? /how is it shared and developed?, is there a shared understanding across staff? how able are staff to make valid judgments about the quality of evidence?

6. Engagement

6.1 (E) Do you find that the research evidence available to your school is presented in a clear and accessible way?

Prompts - can you give some specific examples of evidence used and how accessible you find it? /variation across different sources

6.2 Are there any teaching and learning issues where the school has looked for evidence but were not able to find anything relevant or useful?

Probe : pedagogical focus/ wer looked / what found - why not relevant and/or useful

6.3 What engagement (If any) do governors have in either promoting or using evidence?

Prompts: Do they ask for evidence at governor's meetings?/ Do they seek to satisfy themselves that the head is basing decisions on evidence? Examples?

7. Use of Evidence

7.1 (U) How do teachers in the school go about using evidence?-for example if they find a piece of useful evidence what do they do with it?

Probe : what is the process/ who is involved/ how does it come about?/ variation in approaches -and if so rationale for varied approaches {unpicking their theories of change}; any tools used across the school; any specific school evidence sources e.g. subscriptions -partnerships with HEIs?/ relationship to other ways of improving things?

7.2 (U) Do teachers in your department/team engage in undertaking research/enquiry to develop practice? If so tell me what you do and how you go about this.

Prompts: who is involved? - individuals/ teams/ whole school/ network?;what is the process? (and where is evidence used in those processes/ how is it perceived that this will improve outcomes)? what tools/approaches e.g. EEF DIY evaluation toolkit; enquiry model -other? who initiates /drives this?/ relationship to other ways of improving things?

7.4 (U) How confident as a school are you that you can choose the most innovations/ interventions to test out to improve pupil outcomes?

Probe: Check relationship of confidence to confidence in using evidence (e//g c/f practice knowledge);

8. Enablers and barriers to EBT in the school

8.1 (U): How well equipped do you feel you and your SLT are to support EBT in your school?

Prompts:

- o *areas of confidence/ areas less confident*
- o *what does well equipped mean?*

8.2 What support do you/ other senior leaders get to implement EBT?

(e.g. from EEF/ NCTL/ networks /other sources) - how does this come about?/ what are the processes

Probe - what forms of support have been effective in enabling you to lead EBT - what is it about those forms of support that has made them effective?

8.3 On a scale of 1 to 10 -tell me whether you think your school culture (i.e 'the way we do things round here') is evidence friendly - 1 is not at all and 10 is we talk about and use evidence all the time
Prompts :
- • *tell me more about your reasons for giving this score*
- • *who champions using evidence in the school? -what do they do?*
- • *what conversations do you hear about evidence?*

8.4 What factors support the implementation of EBT in your school?

Probes: school-culture; staff attitudes; key enthusiasts; links with HEIs; links with other schools; other;

8.5 What factors hinder the implementation of EBT in your school?

Probes: school-culture; staff attitudes; availability of research, accessibility of research; other;

8.6 What would enable the school to further embed EBT?
- • e.g. DfE actions (see logic model); school actions; MAT and/or TSA actions; Ofsted actions

9. Cross -school activity

9.1 Does your school work with other schools to share educational research?
Prompts: how does this come about- what are the processes?; why doyou dothis? /who is influential in making this happen? what triggers this happening? /scale of this- how many schools/ how frequently? / key foci/ are you working collaboratively to understand research -and if so how what are the processes -what do you talk about - give an example?

9.2 Does your school work with other schools to undertake research/ collaborative enquiry?
Prompts: how does this come about- what are the processes? ; / why do you do this? who is influential in making this happen? what triggers this happening? /scale of this- how many schools/ how frequently? / key foci/ is the activity funded by external agencies e/g NCTL? - if not how is it resourced?

10. Impact

10.1 (U) Does the school evaluate the effectiveness and impact of EBT?

Follow on questions: how is this done?/ what have been the main findings so far?

10.2 (building on previous question) Are you able to point to any specific outcomes your department/team's engagement in EBT?

Prompts:

- *For teachers- e.g. more confident, deeper understanding; able to justify your practice to others? how did this come about? any evidence collected on these changes {i.e. perceptions or evidenced}?*
- *For pupils - what outcomes -depth/ breadth ? how did this come about - any evidence collected on these changes {i.e. perceptions or evidenced}?*
- *Other?*

Evidence-based teaching: Draft EBT Panel Interview Schedule: Middle Leader

1. Introduction

Thank you for agreeing to be part of our evaluation panel. This interview is part of an evaluation, commissioned by the Department for Education (DfE), that aims to make an assessment of progress towards a system within which the teaching profession can improve practice through the rigorous use of robust evidence. The research is being undertaken by independent researchers at the Centre for Education and Inclusion Research at Sheffield Hallam University, with colleagues at Durham University and the Institute of Education, London.

From all the schools volunteering to take part in the panel we have selected a range of schools with varying levels of current engagement in EBT and differing characteristics such as school phase and location. The data from the interview will be analysed together with data from other members of the teacher panel and presented in a report that will be available on the DfE website. We may also use the data in professional and academic publications. You will not be named in any publication.

Check consent - referring to information sheet/consent form -if consent not already provided by email.

Check permission to record.

2. About you

2.1 Briefly describe your role in school

2.2 Please tell me what qualifications you have obtained/ are currently undertaking since your first degree and approximate dates?

> {Note: *ITE route and particularly masters may be an influencing factor in terms of willingness to engage/ seeing the relevance of engaging with evidence - and time since qualification may also be relevant}*

3. 'Evidence' and 'evidence-based teaching' (Understanding, attitudes, beliefs and perceived capability)

{Establish the definition of evidence/ EBT being assumed in the following questions and beliefs about and attitudes towards EBT. This section also contains questions that relate to the engagement section of the matrix of engagement}

3.1 (E) Can you think about an aspect of **your own practice** that you have changed in some way in the past year:

- What led you to making that change?
- In what ways (if any) did you draw on evidence in making that change?
  Probe: the role of evidence in informing that decision?/ what they are counting as evidence/ at what points evidence is seen to be useful/important e.g. to understand the problem, identify an innovation etc - for what purposes

{Note: this question is intended to get a sense of the way in which the interviewee understands 'evidence' and evidence -based teaching - in a way that does not lead them to assumed 'desired answers'}

3.2 What do you understand 'evidence-based teaching' to be?

Probes: what counts as evidence and what doesn't? - internally generated / external evidence / how is EBT practised? / can/ in what ways can research impact on practice?

'In the questions that follow we are using the term ' evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews -such as those produced by the Sutton Trust, EEF and John Hattie; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry.'

3.3 (E) How important do you think it is to use evidence to inform teaching?

Probe : why do you think it is important or why not? / what is it important for? / what is it not important for?/ how important compared to other ways of developing your practice? /

3.4 (E) If I had asked you how important evidence was two years ago would your answer have been the same?

- [If changes] - what has led to you changing your opinions on this?

3.5 (E) Using this definition of evidence, is there any **external** research you have come across that has had a significant impact on you? i.e. changed the way you think and/or act? if so, can you explain how and why it came to have a significant impact

Probe: why do you think this research had an impact on you? - e.g. what was it about your context, the research and/or you or other factors that led to this impact?

3.7 (All) On a scale of 1 to 10 how **well equipped** do you personally feel you are to engage in evidence-based teaching? Where 1 is not at and 10 is you feel you have all the skills and knowledge necessary to undertake EBT?

Probe: reasons for rating - capacity and confidence re: awareness, engagement and use / what does well equipped mean to you?

4. Departmental /team (adapt as appropriate the role) approach to EBT

4.1 (E) On a scale of 1-10 how well embedded do you think EBT is in the work of your department/team? Where 1 is not at all and 10 is fully embedded?

Probe: reasons for rating given

4.2 (E) Can you tell me about the sorts of discussions you have in **departmental / team meetings** about teaching and learning (choose a new example if possible). Think about something that your department / team has been working on recently e.g. approaches to curriculum; assessment; outcomes for specific groups of pupils; observation etc

Probe/prompts:

What was talked about; who this was with; how much time was spent discussing this

How did the discussion develop; what else informed these discussions; what action was taken as a result?

What, if any, ideas, articles etc were drawn on to inform these discussions - informal/internal/practical suggestions or external findings from research, or both

4.3 (E) How would you describe the **depth of these discussions**? - *e.g: quick solutions to a practical issue or more in-depth about how/why students learn/ a pedagogical principle*

To what extent did your discussions focus on how and why you thought the [change would have a positive impact]

4.4 What **expectations** (if any) are placed on teachers in your department/team to engage in EBT? / what are they expected to be doing?

Prompts

- *how many/what proportion of staff in what roles are expected to directly access evidence? - through what processes*
- *in what ways are staff expected to use evidence in planning and delivering teaching?*
- *how many/ what proportion of staff are expected to engage in undertaking research - how do they go about this?*
- *how do these expectations come about?-(e.g. school policy, championed by a senior leader, championed by interviewee)*

4.5 (E) How important do you think it is that teachers in your department/team use evidence in their practice?

Probe: compared to other ways of improving teaching and learning in the depertment/team?

4.6 (E) What (if anything) are you expected to do to promote and support EBT in your team department?

Prompts

- *advocate for EBT/ promoting/championing use?*
- *leading evidence based innovations*
- *bringing evidence to teachers attention?*
- *making research more easily accessible? - e.g. sourcing and synthesising research, sending out weblinks etc.*
- *helping teachers engage with research? e.g. discussions in team meetings etc.*
- *helping teachers use research to develop their practices?*
- *helping teachers to undertake their own research?*
For any of the above they are involved in - probe what this involves and how they go about it/ and what appear to be more or less effective in implementing EBT

4.7 (U): How well equipped do you feel to promote and support EBT in your department/ team?

> *Prompts:*

> - *areas of confidence/ areas less confident,*
> - *what it means to be well equipped*

5. Awareness of evidence in the your department/team

5.1 What, if any, **sources of external evidence** are you aware of, that your department/team have drawn on in the last year to inform their practice?

> *Probe to find range: meta-analyses and reviews e.g. EEF toolkit; Hattie's Visible learning; Sutton trust; case studies produced by schools; journal articles; professional articles including TES; other*

5.2 (A) Are you aware of other sources of evidence that the team could draw on?

{as above - to get an indication of the extent of their knowledge of evidence sources}

5.3 <u>If appropriate</u> As far as you know, how do members of your team/department **find out about external evidence** they could use to inform their practice?

> - *Source: own/team members searching - how? distribution from an evidence leader/team leaders/ from senior leaders/ in the library/ via school to school networks and partnerships/ academics visiting the school/school subscription to professional/academic journals/other; contacts with academics; HEI led networks?*
> - *Processes by which it becomes available - e.g. where do you look? / do you do a summary for others? - link to the school development plan, the team identifies key issues and one member/ all members search for evidence where fo thy look?- links to HEIs, who makes this happen?*
> - *How much is available?/ range/ key foci*

5.4 Are there any areas of practice where you have looked for evidence but were not able to find anything relevant or useful?

> *Probe: pedagogical focus/ where looked / what found - why not relevant and/or useful*

5.5 (A) How do you and your team/department decide if you can rely on the evidence you find?

6. Use of Evidence in your department/team

6.1 (E) Thinking about our definition of evidence [**we are using the term ' evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews -such as those produced by the Sutton Trust, EEF and John Hattie; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry**]

Can you give some specific examples of evidence you have **read, heard about or used** (draw from earlier question if relevant) - [if none move to 6.3]

> [If yes] *what was engaging about it (why this article /evidence - e.g. relevance to current issue/interest)? Was it easy to understand? Did it need translating/adapting?*
>
> *Did you share it (with who, why); discuss it (with who, why)? any variation across the range of evidence used*

6.2 (U) (Drawing on examples in previous question) Did you put this or another article/**evidence to use** in your practice? If yes: Tell me how you went about this:

> *Probes: what was the process / who was involved?*
>
> *- direct (e.g.did you just go ahead and experiment/incorporate into teaching, raise/check with head of phase) etc or indirect (e.g. senior/other staff led)*
>
> *how did it come about?/ variation in approaches - and if so rationale for varied approaches {unpicking their theories of change}; tools used*
>
> *how easy was it to use? - did it need translating?*

6.3 (U) Do teachers in your department/team engage in **undertaking research/enquiry** to develop your team/schools practice? If so tell me what you do and how you go about this.

> *Prompts: who is involved? - whole team - some? / school / network? what is the process? (and where is evidence used in those processes/ how is it perceived that this will improve outcomes)? what tools/approaches e,g,EEF DIY evaluation toolkit; enquiry model -other?*

6.4 (U) How **confident** as a department/team are you that you can choose the most innovations/ interventions to test out to improve pupil outcomes?

> *Probe: Why do you feel like this?*
>
> *Check relationship of confidence to confidence in using evidence (e.g c/f practice knowledge);*

7. Enablers and barriers to EBT in the school

7.1 (A) What **support** is available to you in using external evidence and/or undertaking research enquiry, as we define it, for you/your teams' teaching?

Prompts

- *who supports you/ - how is support provided? what does it involve?*
- *other enabling actions ? e.g. are you given time to engage with and/or undertake research ?*
- *any professional development - how does this come about - through school?; networks?; by academic partners?*

Probe - what forms of support has been effective in enabling you to lead EBT - what is it about those forms of support that has made them effective?

7.2 On a scale of 1 to 10 -tell me whether you think your **school culture** (i.e 'the way we do things round here') is evidence friendly - 1 is not at all and 10 is we talk about and use evidence all the time
> *Prompts:*
> - *tell me more about your reasons for giving this score*
> - *do senior leaders talk about evidence? / what sorts of things do they say or do? -(including probing if evidence is handed down as a given this is what you are going to do now or teachers have agency in assessing evidence and adapting to own context)*
> - *who champions using evidence in the school? -what do they do?*

7.3 Are there any other factors that help you embed EBT in your team/department that we haven't talked about?

> (e.g. enthusiasm of staff; links with HEIs; links with other schools; other)

7.4 What factors hinder your use / generation of evidence for your department/team's practice?

> *Probes: school-culture; staff attitudes; availability of research, accessibility of research; other priorities- such as?; other;*

7.5 What would enable you to further embed evidence in relation to the practice of your dept/team?
> *(e.g. DfE actions (see logic model); school actions; MAT and/or TSA actions; Ofsted actions)*

8. Cross-school activity

8.1 Does your team/department work with other schools to **share educational research** [using our definition]?
> *Prompts: how does this come about- what are the processes? /who is influential in making this happen? what triggers this happening? /scale of this- how many schools/ how frequently? / key foci/ are you working collaboratively to understand research - and if so how what are the processes -what do you talk about - give an example?*

8.2 Does your team/department you work with other schools to **undertake research/ collaborative enquiry**?
> *Prompts: how does this come about- what are the processes? ; /who is influential in making this happen? what triggers this happening? /scale of this - how many schools/ how frequently? / key foci/ is the activity funded by external agencies e/g NCTL? - if not how is it resourced?*

9. Impact

9.1 (U) Do you/ your dept/team **evaluate the effectiveness and impact** of any evidence you've used to change practice?

- *Prompts: how is this done?/ what have been the main findings so far?*

9.2 (building on previous question) Are you able to point to any **specific outcomes** your department/team's engagement in EBT?

Prompts:

- *For dept/team staff - e.g. more confident, deeper understanding; able to justify your practice to others? how did this come about? any evidence collected on these changes {i.e. perceptions or evidenced}?*
- *For pupils - what outcomes -depth/ breadth ? how did this come about - any evidence collected on these changes {i.e. perceptions or evidenced}?*
- *Other*

Evidence-based teaching: Draft Teacher Panel Interview Schedule

1. Introduction

Thank you for agreeing to be part of our evaluation panel. This interview is part of an evaluation, commissioned by the Department for Education (DfE), that aims to make an assessment of progress towards a system within which the teaching profession can improve practice through the rigorous use of robust evidence. The research is being undertaken by independent researchers at the Centre for Education and Inclusion Research at Sheffield Hallam University, with colleagues at Durham University and the Institute of Education, London.

From all the schools volunteering to take part in the panel we have selected a range of schools with varying levels of current engagement in EBT and differing characteristics such as school phase and location. The data from the interview will be analysed together with data from other members of the teacher panel and presented in a report that will be available on the DfE website. We may also use the data in professional and academic publications. You will not be named in any publication.

Check consent - referring to information sheet/consent form -if consent not already provided by email.

Check permission to record.

2. About you

2.1 Briefly describe your role in school

2.2 Please tell me what qualifications you have obtained/ are currently undertaking since your first degree and approximate dates?

> {Note: *ITE route and particularly masters may be an influencing factor in terms of willingness to engage/ seeing the relevance of engaging with evidence - and time since qualification may also be relevant*}

3. 'Evidence' and 'evidence-based teaching' (Understanding, attitudes, beliefs and perceived capability)

{Establish the definition of evidence/ EBT being assumed in the following questions and beliefs about and attitudes towards EBT. This section also contains questions that relate to the engagement section of the matrix of engagement}

3.1 (E) Can you think about an aspect of **your own practice** that you have changed significantly in some way in the past year:

- What led you to making that change?
- In what ways (if any) did you draw on evidence in making that change?
  Probe: the role of evidence in informing that decision?/ what they are counting as evidence/ at what points evidence is seen to be useful/important e.g. to understand the problem, identify an innovation etc - for what purposes

{Note: this question is intended to get a sense of the way in which the interviewee understands 'evidence' and evidence -based teaching - in a way that does not lead them to assumed 'desired answers'}

3.2 What do you understand 'evidence-based teaching' to be?

Probes: what counts as evidence and what doesn't? - internally generated / external evidence /how is EBT practised? / can/ in what ways can research impact on practice?

'In the questions that follow we are using the term ' evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews -such as those produced by the Sutton Trust, EEF and John Hattie; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry.'

3.3 (E) How important do you think it is to use evidence to inform teaching?

Probe : why do you think it is important or why not? / what is important for? / what is it not important for?/ how important compared to other ways of developing your practice?

3.4 (E) If I had asked you how important evidence was two years ago would your answer have been the same?

- [If changes] - what has led to you changing your opinions on this?

3.5 (E) Using this definition of evidence, is there any **external** research you have come across that has had a significant impact on you? i.e. changed the way you think and/or act? if so, can you explain how and why it came to have a significant impact

Probe : why do you think this research had an impact on you? - e.g. what was it about your context, the research and/or you or other factors that led to this impact?

3.6 (E) How closely do your views on the importance of using evidence match those of other teachers in your school?

3.7 (All) On a scale of 1 to 10 how **well equipped** do you feel you are to engage in evidence-based teaching? Where 1 is not at and 10 is you feel you have all the skills and knowledge necessary to undertake EBT?

Probe: reasons for rating - capacity and confidence re: awareness, engagement and use / what do they think it means to be well equipped to engage in EBT?

4. Awareness of evidence

4.1 (A) What sources of external evidence that you could use to inform your teaching, are **you aware of**?

Probe to find range: meta-analyses and reviews e.g. EEF toolkit; Hattie's Visible learning; Sutton trust; case studies produced by schools; journal articles; professional articles including TES; other

4.2 (A) What, if any, sources of external evidence have **you drawn on** in the last year to inform your practice?

4.3 If appropriate: How do you **find out about evidence** that you could use to inform your practice?

> *Prompts/probes*
>
> - *Source: own searching - how? distribution from an evidence leader/team leaders/ from senior leaders/ in the library/ via school to school networks and partnerships/ academics visiting the school/school subscription to professional/academic journals/other; contacts with academics; HEI led networks?*
> - *Processes by which it becomes available - e.g. team leader looks for and/or does a summary of things they think important - link to the school development plan, the team identifies key issues and one member/ all members search for evidence - who makes this happen?*
> - *How much is available?/ range/ key foci*

4.4 Are there any areas of practice where you have looked for evidence but were not able to find anything relevant or useful?

> *Probe : pedagogical focus/ where looked / what found - why not relevant and/or useful*

4.5 (A) If appropriate How do you decide if you can rely on the evidence you find?

5. Engagement

5.1 (E) Tell me about the discussions in **school/departmental meetings** about teaching and learning (choose a new example if possible). Think about something that your school or department has been working on recently e.g. approaches to curriculum; assessment; outcomes for specific groups of pupils; observation etc

> *Probe/prompts:*
>
> *What was talked about; who this was with; how much time was spent discussing this*
>
> *How did the discussion develop; what else informed these discussions; what action was taken as a result?:*
>
> *What, if any, ideas, articles etc were drawn on to inform these discussions - informal/internal/practical suggestions or external findings from research, or both*

5.2 How would you describe the depth of these discussions? - *e.g: quick solutions to a pratical issue or more in-depth about how/why students learn/ a pedagogical principle*

> *To what extent did your discussions focus on how and why you thought the [change would have a positive impact]*

5.3 (E) Thinking now about an example of a more **informal, recent conversation** with colleagues about Teaching and Learning - can you describe what you talked about; who with?

Probe: what was the focus and depth of this discussion - e.g: pragmatic/practical issues/ideas; or more evidence/ theoretical/conceptually focused?

To what extent did you or others draw on external evidence?

5.4 (E) Do you or any of your colleagues **champion or lead** the use of research or an area of research in your school?

If so what do you/ they do - and how is this received -what does it lead to? frequency?

6. Use of Evidence

6.1 (E) Thinking about our definition of evidence [**we are using the term ' evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews -such as those produced by the Sutton Trust, EEF and John Hattie; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry**]

Can you give some specific examples of evidence you have **read, heard about or used** (draw from earlier question if relevant) - [if none move to 6.3]

[If yes] what was engaging about it (why this article /evidence - e.g. relevance to current issue/interest)? Was it easy to understand? Did it need translating/adapting?

Did you share it (with who, why); discuss it (with who, why)? any variation across the range of evidence used

6.2 (U) (Drawing on examples in previous question) Did you put this or another article/**evidence to use** in your practice? If yes: Tell me how you went about this:

Probes: what was the process / who was involved?

- direct (e.g. did you just go ahead and experiment/incorporate into teaching, raise/check with head of phase) etc or indirect (e.g. senior/other staff led)

how did it come about?/ variation in approaches - and if so rationale for varied approaches {unpicking their theories of change}; tools used

how easy was it to use? - did it need translating?

6.3 (U) Do you engage in **undertaking research/enquiry** to develop your or your team/school's practice? If so tell me what you do and how you go about this.

Prompts: who is involved? - individual/ team/ school/ network? what is the process? (and where is evidence used in those processes/ how is it perceived that this will improve outcomes)? what tools/approaches e.g. EEF DIY evaluation toolkit; enquiry model; other

6.4 (U) How **confident** do you feel in choosing the most appropriate innovations/ interventions to improve pupil outcomes?

Probes: Why do you feel like this?

- follow up if not mentioned - Check relationship of confidence to confidence in using evidence (eg c/f practice knowledge);

7. Enablers and barriers to EBT in your school

7.1 What **support** is available to you to help you in using external evidence and/or undertaking research enquiry, as we define it, for your teaching?

Prompts

- *who supports you -e.g. partner teacher, evidence leader/ team leaders; senior leaders; network - in what ways? (e.g mentoring/coaching, information providers etc,; bring teachers together to discuss evidence)*
- *other enabling actions ? eg, are you given time to engage with and-or undertake research ?*
- *any professional development - for accessing and using evidence and/or doing your own research? - how does this come about - through school?; networks?; by academic partners?*

Probe - what forms of support has been effective in this way - what is it about those forms of support that has made them effective?

7.2 On a scale of 1 to 10 - tell me whether you think your **school culture** (i.e 'the way we do things round here') is evidence friendly [again, using our definition] - 1 is not at all and 10 is we talk about and use evidence all the time
Prompts:
- *tell me more about your reasons for giving this score*
- *do senior leaders talk about evidence? / what sorts of things do they say or do? -(including probing if evidence is handed down as a given this is what you are going to do now or teachers have agency in assessing evidence and adapting to own context)*
- *who champions using evidence in the school? -what do they do?*

7.3 Are there any other factors that help you embed the use/generation of evidence in your practice that we haven't talked about?

(e.g. enthusiasm of other staff; links with HEIs; links with other schools; other;)

7.4 What factors hinder your use/generation of evidence in your practice?

Probes: school-culture; staff attitudes; availability of research, accessibility of research; other priorities- such as?; other;

7.5 What would enable you to further embed evidence in relation to your practice?
Prompts: department/ team actions; school actions

8. Cross -school activity

8.1 Do you work with other schools to **share evidence** [using our definition]?
Prompts: how does this come about - what does it involve / what are the processes? / who is influential in making this happen? what triggers this happening? /scale of this- how many schools/ how frequently? / key foci / are you working collaboratively to understand research - and if so how what are the processes - what do you talk about - give an example?

8.2 Do you **work with other schools to undertake research/ collaborative enquiry**?
Prompts: how does this come about - what does it involve / what are the processes? / who is influential in making this happen? / is it funded by external agencies e.g. NCTL? / what triggers this happening? / scale of this- how many schools/ how frequently? / key foci

9. Impact

9.1 Are you able to point to any **specific outcomes from using/generating evidence**?

Prompts:

- For yourself - e.g. more confident, deeper understanding; able to justify your practice to others? how did this come about? any evidence collected on these changes {i.e. perceptions or evidenced}?
- For pupils - what outcomes -depth/ breadth? how did this come about - any evidence collected on these changes {i.e. perceptions or evidenced}?
- Other? e.g. for colleagues

3.2 Year 2 Research Tools

EBT Head teacher Interview - Year 2

Introduction

Thank you for continuing to take part in our EBT panel. This is a follow up to the telephone interview we conducted last academic year. Just to remind you, this is part of an evaluation commissioned by the Department for Education (DfE) - it aims to make an assessment of progress towards a teaching profession that can improve its practice through the rigorous use of robust evidence. The research is being undertaken by independent researchers at the Centre for Education and Inclusion Research at Sheffield Hallam University, with colleagues at Durham University and the Institute of Education, London.

Your school is one of a range selected because of their varying levels of engagement in EBT and differing characteristics such as school phase and location. The data you provided in the summer was analysed together with data from other members of the panel and presented in an internal interim report to the DfE. Together with the data from Year 1, we will conduct an overall analysis and present this in a final report that will be available on the DfE website. We may also use the data in professional and academic publications. Neither you, nor your school will be named in any reports or publications.

Check permission to record.

Re-check consent - referring to information sheet/consent form - record verbal consent if not already provided by email.

Note: notes in curly brackets { } can be used if asked to clarify - or guide probing but do not need to all be addressed

1. **School context**

1.1 Any notable changes to school context since last interview?

> {*e.g. new whole-school approaches/initiatives, improvement priorities, governance, accountability/Ofsted inspections, significant changes to staffing, student profile, performance/results etc.*}

2. **Role**

2.1 Confirm year 1 role (within school and any significant responsibilities beyond the school) and check any changes this year

3. **Influences on changes in practice**

{Note: This is an open section -encourage the interviewee to talk about a recent change to practice and what influences this – we are interested in any forms of evidence used (not just research evidence)–and the ways in which different forms of evidence are brought together in practice.}

3.1 What is the **most significant change you've made to your school's T&L/ practice** this academic year/since we last spoke? (e.g. a new initiative/approach or implementation of resources)

What prompted this change?
{e.g. performance management priority, whole-school/chain/LA priority, departmental/subject, CPD, promotional product/material, other official advice/guidance, external research, self-generated}

How did you implement this change?
{e.g. Who is/was involved? / Your role? /Scale of the change? /To what extent was any 'innovation' implemented as prescribed or adapted? If so, how and why?}

Did information or evidence inform this change? If so what sorts of evidence?
{e.g. Where/who did this come from? (e.g. own experience, colleagues, other schools, school data, school-based inquiry, CPD, press/social media, research - meta-analyses/reviews etc)}

How did you **use this evidence**?
What was its purpose? {e.g. in understanding, communicating, persuading, identifying the innovation etc} / Which types of evidence have been most/less important in influencing this change?

4.   School approaches to evidence-based teaching
4.1 What do you **understand evidence-based teaching** to be?

What counts as evidence and what doesn't? / for what purposes is evidence used?

4.2 Do you think your understanding of evidence-based teaching has changed since we last spoke (in …)?   If so, how has it changed and what triggered that change in your understanding?

**'In the questions that follow we are using the term 'evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence

reviews; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry.'

4.3 How important do you think it is to use **<u>research</u>** evidence to inform teaching?

> *Why is important or why not? / what is it important for? / what is it not important for?/ how important compared to other forms of evidence {e.g. school data, evidence of practice from other schools, professional knowledge}?*

4.4 In our last interview, you gave the school a score of x/10 for in terms of having the skills and knowledge necessary to undertake research-EBT – where 1 is not all and 10 is very well equipped. How would you rate your school now out of 10?

> *Reasons for rating now and any change from previous year*

{Note: if no rating for last year get one for both years}

4.5 If you know that an approach or intervention has a research evidence base does this increase its credibility or increase the likelihood that you will introduce it in your school?

> *Has this changed over time?*

4.6 If you know that an approach or intervention has a research evidence base, does this increase its **credibility** to staff in your school and/or increase the likelihood that you will introduce it in your school?

> *Has this changed over time?*

4.7 (see Year 1 record) Last time you talked about …….. being the expectations placed on teachers in the school to engage in EBT. / Can you update me on what is continuing and what (if anything) has changed?

> *Probes **only if needed***

- *how many / what proportion of staff in what roles are expected to directly access evidence?*
- *in what ways are staff expected to use evidence in planning and delivering teaching?*
- *how many/ what proportion of staff are expected to engage in undertaking research?*

5. Awareness, engagement and use

Note: In this section only ask detailed questions if the school is using/ engaging with/ or aware of research EBT according to our definitions of research evidence and use, engagement and awareness..

5.1 We are interested in understanding more about how schools develop **awareness** of research, **engage** with research and **use** research.

I'd like consider each of these aspects in turn:

5.1.1 First, focusing on the *use* of research evidence We define *use* **as: any activity where research evidence is actively used to investigate and change practice**

Can you give me **an example of staff using research evidence** to develop teaching and learning practice in since we last spoke? Note: if possible pick up on school rather than cross-school use here

Who was involved? – {individual/ team/ school/ network?} what did you/your staff do? what approaches and tools were used?/ how was the evidence used? did the staff undertake their own research/enquiry - if so what did this involve?

How easy was the research evidence to use? - did it need 'translating' - and if so how did this happen?

Are there any other ways in which your school has used research evidence?

Has the **use** of research evidence in your school changed since we last spoke? (*scale: much higher / higher / about the same/ less / much less and open comments*)

5.1.2 Secondly, we define *engagement* as: thinking that it is important to draw on research evidence to inform and improve practice, and having conversations about the evidence.

What happens in your school between knowing about a piece of research out there and doing something with it, or deciding not to use it, in your school?

{e.g. Who is involved?/ are there facilitators and/or gatekeepers / is there a process e.g via PM, staff meetings?}

Do you hear staff talking about evidence either in formal or informal settings? if yes - what sort of things do they talk about? can you give an example? *(Note: trying to get a sense of practical solutions or in-depth how/why students learn/ pedagogical principles)*

Where and when do they talk about evidence? Clarify most staff, some staff or a few staff?

What sources of the evidence do staff refer to when they talk about research evidence*?*
- {e.g meta-reviews, research journals, professional articles, research digests, books, other} /
are **reviews/digests** *forwarded or complied by the school? {If so} How do staff use these? /How effective/useful do you think they are for staff? And why?*

Thinking about **engagement** with research evidence as a whole - that is: thinking that it is important to draw on research evidence to inform and improve practice, and having conversations about the evidence. Has this changed since we last spoke… if so, in what ways? (*scale: much higher/ higher / about the same/ less/ much less - plus open comments*)

5.1.3 Thirdly, we define **awareness** as: understanding what research evidence is, knowing how to access research, being able to judge how robust research evidence is, knowing that it can help improve practice, how it does that, and how to go about being 'evidence informed'

How aware are your staff of these things?
Which staff/ depth of awareness

Has staff **awareness** of research evidence changed since we last spoke… if so, in what ways? (*scale: much higher/ higher / about the same/ less/ much less - plus open comments*)

5.2 Has your school been involved in any external projects as a research participant? If so what has been the impact for staff and the school?
What involved in/ which staff

6.   Enablers and barriers to Research - EBT in your school

6.1 In this question we are going to focus on what is in place in terms of the **structures, systems, processes, policies** and **guidance** in your school to support research evidence-based teaching. Last time (year 1 record) you discussed…. being in place/planned. Can you update me on what is continuing and any changes since we last spoke?

{Probes (only if needed)

- *Whole school structures/processes and policies*

- *Guidance for teachers e.g. on judging the robustness of research/ accessing evidence/ undertaking research/enquiry*

- *Performance management, appraisal structures?*

- *Activities of champions/research lead roles, mentors, research groups, dedicated time etc*

- *CPD within school and external that relates to EBT / support for masters degrees? / other relevant professional learning?}*

6.2 (See year 1 record) What (if anything) do you expect **middle leaders** to do to support teachers to engage in EBT?
{e.g. promoting EBT? / leading evidence-based innovations etc.?/ all middle leaders or some middle leaders roles? - rationale for this?}

6.3 (See Y1 record) Are any other kinds of **support** available to teachers for using research evidence? If so , what are these?
Is this a change from last year? - if so what has changed and why?

6.4 Across the different forms of support that is provided in your school to support EBT - which approaches have you found have the **greatest impact** on changing teacher practices?
Can you explain why you think these approaches were particularly effective?
Which forms of support are least crucial in your school? and why?

6.5 Last year, you scored your **school culture** (i.e 'the way we do things round here') x/10 for being research evidence-friendly, where 1 is not at all research-evidence friendly, and 10 is we talk about and use evidence all the time. How would you score your school now?

Why the same / different?

Do you / senior leaders talk about research evidence any differently? / In what ways?

What other factors influence the school culture in relation to supporting EBT- (e.g. enthusiasm of staff, links with HEIs, staff doing higher degrees etc, links with other schools etc) Has this changed since last year - if so how?

6.6 Compared to last year, how **confident** do you feel in supporting EBT in your school?

What (if anything) has changed?

What supports you in implementing EBT? (e.g. networks, meetings, conferences etc)

6.7 (See Year 1 record) What factors **hinder** the use of research evidence in your schools' practices or teachers being able to undertake their own research/enquiry?

{e.g. School-culture; staff attitudes; availability of research, accessibility of research; other priorities - such as?}

Has this changed since last year? If so, how and why?

6.8 What would enable you to **further embed** research evidence into the school's practices and/or help staff undertake more research/enquiry?

{e.g. DfE actions, school actions, MAT/TAS, Ofsted etc}

7.   Cross-school activity

7.1 Since last year, has the school worked with other schools to **share and exchange research evidence** and /or **to undertake research / collaborative enquiry**? [using our definition**]?

How did this come about - what /who was involved? who is influential in making this happen? scale - how many schools/ how frequently? / is it funded by external agencies {e.g. NCTL/ EEF}?/ key foci / what are the processes?

Has the degree of involvement changed since we last spoke? If so, in what ways and why?

8.   Evaluating the impact of changes to practice

8.1 Last time you mentioned (see Y1 record)....in terms of **evaluating the impact** of changes to practice? Has this changed since we last spoke and if so in what ways?

{e.g. anecdotally/experientially or robust collection and analysis of data; Who is involved in this? How much emphasis is there on collecting data/evidence of impact? How are the findings used and shared?}

9.   Outcomes for teachers

9.1 Thinking about all the ways that research evidence is used in your school and any research undertaken by teachers, what do you think the **benefits have been for staff and the schoo**l overall?

{e.g. *more confident staff, deeper understanding; improved practice/performance; critical thinking/questioning/challenging findings/methods*}

10. Advice for other schools

10 .1 **For highly-engaged schools only** : What **advice** would you give other schools looking to embed research-EBT into their practice?

{e.g. What have you learnt about effective ways of doing this / overcoming barriers for staff?}

10.2 **All schools***:* Do you think there are any particular pre-requisites for schools to be able to engage in EBT?

For highly-engaged schools only probe if time: *underlying attributes and processes that relate to their ability to structure, manage and deliver change)*
- {coherent change management processes
- clear and shared school improvement objectives
- an outward looking culture
- wise and precise use of data
- understanding of effective CPD process
- understanding of effective implementation
- integration of different research and enquiry activities into overall school decision-making}

11. Do you have any other comments on research related EBT?

EBT or research champion or if one not designated the CPD lead - Year 2

Introduction

Thank you for taking part in our EBT panel. We talked to the Head and other staff in your school last year and are talking to the Head and another teacher this year. This is part of an evaluation commissioned by the Department for Education (DfE) - it aims to make an assessment of progress towards a teaching profession that can improve its practice through the rigorous use of robust evidence. The research is being undertaken by independent researchers at the Centre for Education and Inclusion Research at Sheffield Hallam University, with colleagues at Durham University and the Institute of Education, London.

Your school is one of a range selected because of their varying levels of engagement in EBT and differing characteristics such as school phase and location. The data you provided in the summer was analysed together with data from other members of the panel and presented in an internal interim report to the DfE. Together with the data from Year 1, we will conduct an overall analysis and present this in a final report that will be available on the DfE website. We may also use the data in professional and academic publications. Neither you, nor your school will be named in any reports or publications.

Check permission to record.

Re-check consent - referring to information sheet/consent form - record verbal consent if not already provided by email.

Note: notes in curly brackets { } can be used if asked to clarify - or guide probing but do not need to all be addressed

12. Role and qualifications

1.1 What is your role and main responsibilities in your school?

1.2 What, if any, qualifications have you taken since qualifying as a teacher that have included a focus on EBT or undertaking research?

> (e.g. NPQH, ML qualifications, masters, doctorate)

13. Influences on changes in practice

Note: This is an open section -encourage the interviewee to talk about a recent change to practice and what influences this – we are interested in any forms of evidence used (not just research evidence)–and the ways in which different forms of evidence are brought together in practice.

3.1 What is the **most significant change you've made to your school's T&L/ practice** this academic year/since we last spoke? (e.g. a new initiative/approach or implementation of resources)

What prompted this change?

{e.g. performance management priority, whole-school/chain/LA priority, departmental/subject, CPD, promotional product/material, other official advice/guidance, external research, self-generated}

How did you implement this change?

{e.g. Who is/was involved? / Your role? /Scale of the change? /To what extent was any 'innovation' implemented as prescribed or adapted? If so, how and why?}

Did information or evidence inform this change? If so what sorts of evidence?

{e.g. Where/who did this come from? (e.g. own experience, colleagues, other schools, school data, school-based inquiry, CPD, press/social media, research - meta-analyses/reviews etc.}

How did you **use this evidence**?

What was its purpose? {e.g. in understanding, communicating, persuading, identifying the innovation etc.} / Which types of evidence have been most/less important in influencing this change?

14. Evidence-based teaching

4.1 What do you **understand evidence-based teaching** to be?

What counts as evidence and what doesn't? / for what purposes is evidence used?

**'In the questions that follow we are using the term 'evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry.'

4.3 How important do you think it is to use **research** evidence to inform teaching?

Why is important or why not? / what is it important for? / what is it not important for?/ how important compared to other forms of evidence {e.g. school data, evidence of practice from other schools, professional knowledge}? / have you views on importance changes over the last two years -if so how did this change come about?

4.4 How would you rate **your school overall** out of 10, in terms of having the skills and knowledge necessary to undertake research-EBT?

What are your reasons for this rating?

4.5 If you know that an approach or intervention has a research evidence base, does this increase its **credibility** to staff in your school and/or increase the likelihood that you would introduce it in your own practice or recommend it to others?

5.Awareness, engagement and use

Note: In this section only ask detailed questions if the school is using/ engaging with/ or aware of research EBT according to our definitions of research evidence and use, engagement and awareness..

5.1 We are interested in understanding more about how schools develop **awareness** of research, **engage** with research and **use** research.

I'd like to consider each of these aspects in turn:

5.1.1 First, focusing on the *use* of research evidence in your school. We define *use* **as: any activity where research evidence is actively used to investigate and change practice**

Can you give me **an example of staff using research evidence** to develop teaching and learning practice since we last spoke? Note: if possible pick up on school rather than cross-school use here and something the interviewee has supported

Who was involved? – {individual/ team/ school/ network?} what did you/other staff do? what approaches and tools were used?/ how was the evidence used? did the staff undertake their own research/enquiry - if so what did this involve?

How easy was the research evidence to use? - did it need 'translating' - and if so how did this happen?

Are there any other ways in which you/ your school have used research evidence?

5.1.2 Secondly, we define *engagement* as: thinking that it is important to draw on research evidence to inform and improve practice, and having conversations about the evidence.

What happens in your school between knowing about a piece of research out there and doing something with it, or deciding not to use it, in your school?

{e.g. What is your role in this? Who else involved and what do they do?/ is there a process e.g. via PM, staff meetings?}

Do you hear staff talking about evidence either in formal or informal settings? {if yes} - what sort of things do they talk about? can you give an example? *(Note. trying to get a sense of practical solutions or in-depth how/why students learn/ pedagogical principles)*

Where and when do they talk about evidence? Clarify most staff, some staff or a few staff?

What sources of the evidence staff refer to when they talk about research evidence*?*
- {e.g. meta-reviews, research journals, professional articles, research digests, books, other}.
*/ are **reviews/digests** forwarded or complied by the school? {If so} How do staff use these? /How effective/useful do you think they are for staff? And why?*

5.1.3 Thirdly, we define ***awareness*** as: understanding what research evidence is, knowing how to access research, being able to judge how robust research evidence is, knowing that it can help improve practice, how it does that, and how to go about being 'evidence informed'

How aware are staff in your school of these things?
Which staff/ depth of awareness

5.2 Has your school been involved in any external projects as a research participant? If so what has been the impact for you, other staff and the school?
What involved in/ which staff

6. Enablers and barriers to Research - EBT in your school

6.1 What is your role in relation to promoting and supporting research EBT? (*as per our definition)?

What do you do/ who do you work with? / scale of work - in school and beyond the school / what are the intended outcomes of the activity

6.2 Can you tell me about other **structures, systems, processes, policies** or **guidance** in your school to support research evidence-based teaching.

{Probes (only if needed)

- *Whole school structures/processes and policies*

- *Guidance for teachers e.g. on judging the robustness of research/ accessing evidence/ undertaking research/enquiry*

- *Performance management, appraisal structures?*

- *Activities of other champions/research lead roles, mentors, research groups, dedicated time etc.*

- *CPD within school and external that relates to EBT / support for masters degrees? / other relevant professional learning?}*

6.3 Across the different forms of support that is provided in your school to support EBT - which approaches have you found have the **greatest impact** on changing teacher practices?
> *Can you explain why you think these approaches were particularly effective?*
> *Which forms of support are least crucial in your school? and why?*

6.4 How would you score your **school culture** (i.e 'the way we do things round here') x/10 for being research evidence-friendly, where 1 is not at all research-evidence friendly, and 10 is we talk about and use evidence all the time?

> *Reasons for score?*
> *What factors do you think influence the school culture in relation to supporting EBT- {e.g. enthusiasm of staff, links with HEIs, staff doing higher degrees etc., links with other schools etc.}*

6.5 Compared to last year, how **confident** do you feel in supporting EBT in your school?
> *What (if anything) has changed?*
> *What supports you in implementing EBT? (e.g. networks, meetings, conferences etc)*

6.6 What factors **hinder** the use of research evidence in your schools' practices or teachers being able to undertake their own research/enquiry?
> *{e.g. School-culture; staff attitudes; availability of research, accessibility of research; other priorities - such as?}*

7. Cross-school activity

7.1 Since last year, has the school worked with other schools to **share and exchange research evidence** and /or **to undertake research / collaborative enquiry**? [using our definition**]?

> *How did this come about - what was your role in this /who else was involved? who is influential in making this happen? scale - how many schools/ how frequently? / is it funded by external agencies {e.g. NCTL/ EEF}?/ key foci / what are the processes?*

8. Evaluating the impact of changes to practice

8.1 How do you go about evaluating the impact of changes to practice in your school?
{e.g. anecdotally/experientially or robust collection and analysis of data; Who is involved in this?}
Do you have a particular role in supporting this? {How much emphasis is there on collecting data/evidence of impact? How are the findings used and shared?}

9. Outcomes for teachers

9.1 Thinking about all the ways that research evidence is used in your school and any research undertaken by teachers, what do you think the **benefits have been for staff and the schoo**l overall?

{e.g more confident staff, deeper understanding; improved practice/performance; critical thinking/questioning/challenging findings/methods}

10. Advice for other schools

10 .1 **For highly-engaged schools only** : What **advice** would you give other schools looking to embed research-EBT into their practice?

{e.g. What have you learnt about effective ways of doing this / overcoming barriers for staff?}

10.2 **All schools***: Do you think there are any particular pre-requisites for schools to be able to engage in EBT?

{For highly-engaged schools only probe if time: *underlying attributes and processes that relate to their ability to structure, manage and deliver change)*
- coherent change management processes
- clear and shared school improvement objectives
- an outward looking culture
- wise and precise use of data
- understanding of effective CPD process
- understanding of effective implementation
- integration of different research and enquiry activities into overall school decision-making}

11. Do you have any other comments on research related EBT?

EBT Teacher interview - Year 2

Introduction

Thank you for continuing to take part in our EBT panel. This is a follow up to the telephone interview we conducted last summer. Just to remind you, this is part of an evaluation commissioned by the Department for Education (DfE) - it aims to make an assessment of progress towards a teaching profession that can improve its practice through the rigorous use of robust evidence. The research is being undertaken by independent researchers at the Centre for Education and Inclusion Research at Sheffield Hallam University, with colleagues at Durham University and the Institute of Education, London.

Your school is one of a range selected because of their varying levels of engagement in EBT and differing characteristics such as school phase and location. The data you provided in the summer was analysed together with data from other members of the teacher panel and presented in an internal interim report to the DfE. Together with the data from Year 1, we will conduct an overall analysis and present this in a final report that will be available on the DfE website. We may also use the data in professional and academic publications. Neither you, nor your school will be named in any reports or publications.

Check permission to record.

Re-check consent - referring to information sheet/consent form - record verbal consent if not already provided by email.

Note: notes in curly brackets { } can be used if asked to clarify - or guide probing but do not need to all be addressed

1.   School context

1.1 Any notable changes to school context or priorities since last interview?

{Note: this is only to pick up any changes significant to the teacher}

2.   Role

2.1 Confirm year 1 role and check any changes this year

3.   Influences on changes in practice

Note: This is an open section -encourage the interviewee to talk about a recent change to practice and what influences this – we are interested in any forms of evidence used (not just research evidence)–and the ways in which different forms of evidence are brought together in practice.

3.1 What is the **most significant change you've made to your practice** this academic year/since we last spoke? (e.g. a new approach, initiative or resource)

What prompted this change?

{e.g. performance management priority, whole-school/chain/LA priority, departmental/subject, CPD, promotional product/material, other official advice/guidance, external research, self-generated}

How did you implement this change?

{e.g. Who is/was involved? / Your role? /Scale of the change? /To what extent was any 'innovation' implemented as prescribed or adapted? If so, how and why?}

Did information or evidence inform this change? If so what sorts of evidence?

{e.g. Where/who did this come from? (e.g. own experience, colleagues, other schools, school data, school-based inquiry, CPD, press/social media, research - meta-analyses/reviews etc.}

How did you **use this evidence**?

What was its purpose? {e.g. in understanding, communicating, persuading, identifying the innovation etc.} / Which types of evidence have been most/less important in influencing this change?

4. Evidence-based teaching

4.1 What do you **understand evidence-based teaching** to be?

What counts as evidence and what doesn't? / for what purposes is evidence used?

4.2 Do you think your understanding of evidence-based teaching has changed since we last spoke (in …)? {refer to year 1 data if appropriate} If so, how has it changed and what triggered that change in your understanding?

**'In the questions that follow we are using the term 'evidence' to mean seeking out and using: quantitative and qualitative research findings generated by external researchers; evidence reviews; external evaluations; and/or research produced by teachers/schools that is underpinned by systematic enquiry.'

4.3 How important do you think it is to use <u>**research**</u> evidence to inform teaching?

Why is important or why not? / what is it important for? / what is it not important for?/ how important compared to other forms of evidence {e.g. school data, evidence of practice from other schools, professional knowledge}? / have you views on importance changes since we last spoke – {if so} how did this change come about?

4.4 In our last interview, you gave yourself a score of x/10 for in terms of being equipped to engage in research-EBT – where 1 is not all and 10 is very well equipped. How would you rate yourself now out of 10?

Reasons for rating now and any change from previous year {e.g. skills, knowledge, confidence}

{Note: if no rating for last year get one for both years}

4.6 If you know, or are told, that an approach or intervention has a research evidence base does increase its **credibility and/or the likelihood that you will adopt** the approach?

Has this changed over time?

5. Awareness, engagement and use

5.1 We are interested in understanding more about how schools develop **awareness** of research, **engage** with research and **use** research.

I'd like to consider each of these aspects in turn:

5.1.1 First, focusing on the *use* of research evidence We define *use* **as: any activity where research evidence is actively used to investigate and change practice**

Can you give me **an example where you have used research evidence** to develop teaching and learning practice since we last spoke? {Note: if possible pick up on school rather than cross-school use here. If no use example, ascertain if this is less use than last year or the same- then go to 5.1.2}

Who was involved? – {you/ your team/ school/ network}? what did you do? what approaches and tools were used?/ how was the evidence used? did you and/or other staff undertake your own research/enquiry - if so what did this involve?

How easy was the research evidence to use? - did it need 'translating' - and if so how did this happen?

Are there any other ways in which you have used research evidence?

*Has the your **use** of research evidence changed since we last spoke? (scale: much higher / higher / about the same/ less / much less and open comments)*

5.1.2 Secondly, we define **engagement** as: thinking that it is important to draw on research evidence to inform and improve practice, and having conversations about the evidence.

> Do you think your engagement with research EBT this changed since we last spoke… if so, in what ways? (*scale: much higher/ higher / about the same/ less/ much less - plus open comments*)

> Have you ever found a piece of research evidence yourself that you thought would be useful to help your practice or your colleagues practices? {If so,} - what happened in your school between knowing about a piece of research out there and doing something with it, or deciding not to use it, in your school?

> *{e.g. Who is involved?/ are there facilitators and/or gatekeepers / is there a process e.g via PM, staff meetings?}*

> Do you hear talk with other staff about research evidence either informally or in meetings? {If yes,} - where and when do they talk about evidence - and what sort of things do you talk about? Can you give an example? *{Note. trying to get a sense of practical solutions or in-depth how/why students learn/ pedagogical principles}*

> What sources of the evidence do you or your colleagues refer to when they talk about research evidence*?*
> *{ - e.g. meta-reviews, research journals, professional articles, research digests, books, other.}*
> */ Are reviews/digests forwarded or complied by the school?*

5.1.3 Thirdly, we define **awareness** as: understanding what research evidence is, knowing how to access research, being able to judge how robust research evidence is, knowing that it can help improve practice, how it does that, and how to go about being 'evidence informed'

How aware are you of these things?

Has your **awareness** of research evidence changed since we last spoke… if so, in what ways? (*scale: much higher/ higher / about the same/ less/ much less - plus open comments*)

5.2 Has you or your school been involved in any external projects as a research participant? If so what has been the impact for you and your colleagues?

6. Enablers and barriers to Research-EBT in your school

6.1 What **support or CPD** is available to you to help you in using research evidence and/or undertaking research /enquiry?

> *{e.g. CPD - mentoring/ coaching, bringing teachers together to discuss evidence, Masters/further study, inset sessions. Other enabling actions: performance management, dedicated time, support from a research champion or other middle leaders or other colleagues}*
>
> *Which forms of support (if available) have been most effective in helping you access or use research evidence or undertake your own research/enquiry? What is it about those forms of support that has made them effective?*
>
> *Is the support available the same or different to last year? {If so,} in what ways {use previous data to inform questioning}*

6.2 Last year, you scored your school culture (i.e 'the way we do things round here') x/10 for being research evidence-friendly, where 1 is not at all research-evidence friendly, 10 is we talk about and use evidence all the time.

How would you score your school now? Why the same/different?

> *Do senior leaders talk about research evidence any differently? / What sorts of things do they say or do?*
>
> *Is research-evidence mostly reviewed by senior colleagues or research champions who decide what the school will make use of, or do teachers access evidence directly?*
>
> *Do senior leaders provide detailed information about how they want research evidence to be used to shape practice or do teachers take the evidence and together (or individually?) work out how to change practice?*

6.3 What factors hinder your use of research evidence in your practice or being able to undertake your own research/enquiry?
> *{e.g. School-culture; staff attitudes; accessibility of research; other priorities- such as?}*
> *Has this changed since last year? If so, how?*

6.4 What would enable you to further embed research evidence in relation to your practice and/or undertake your own research/enquiry?
> *{e.g. personal/ department/ team actions; school actions}*

7.   Cross-school activity

7.1 Since last year, have you worked with teachers in other schools to **share and exchange research evidence** and /or **to undertake research / collaborative enquiry**? [using our definition**]?

How did this come about - what happens /who is involved? scale - how many schools/ how frequently do you meet? / is it funded by external agencies {e.g. NCTL/ EEF}?/ key foci ?

Has the degree of involvement changed since we last spoke? If so, in what ways and why?

8.   Evaluating the impact of changes to practice

8.1 How do you and other teachers know whether a new practice/change **makes any difference**?

{e.g. anecdotally/experientially or robust collection and analysis of data; Who is involved in this? How much emphasis is there on collecting data/evidence of impact? How are the findings used and shared?}

Has this changed since we last spoke, {and if so} in what ways?

9.   Outcomes for teachers

9.1 Thinking about all the ways that you have used research evidence and any research/enquiry you have undertaken, what have you gained? what difference has it made to you…?

{e.g more confident staff, deeper understanding; improved practice/performance; critical thinking/questioning/challenging findings/methods}

10. Do you have any other comments on research related EBT in your school?

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