

Evidence for the Frontline

Evaluation report and executive summary

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The Education Endowment Foundation (EEF) is an independent grant-making charity dedicated to breaking the link between family income and educational achievement, ensuring that children from all backgrounds can fulfil their potential and make the most of their talents.

The EEF aims to raise the attainment of children facing disadvantage by:

- identifying promising educational innovations that address the needs of disadvantaged children in primary and secondary schools in England;
- evaluating these innovations to extend and secure the evidence on what works and can be made to work at scale; and
- encouraging schools, government, charities, and others to apply evidence and adopt innovations found to be effective.

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Executive summary

The project

Evidence for the Frontline (E4F) is an online brokerage service designed to provide teachers and school leaders with timely access to relevant evidence on supporting young people's learning. It was developed by Sandringham School and the Institute for Effective Education (IEE) at The University of York, with support from the Coalition for Evidence Based Education (CEBE).

Teachers and school leaders develop their own questions about improving teaching and learning and post them on the online platform. An online broker then matches the question to an academic researcher for a response; or signposts the teachers to relevant published evidence and answers already provided by the service. In some cases the broker supports the user to frame their question most effectively before passing it on. Examples of the research questions included: 'Are there any studies that set out to explicitly explore the influence that inter-school collaboration has on student outcomes?'; and 'Is there any evidence to suggest that students perform better if their Science teacher is teaching within their Science specialism up to Key Stage 4?'

After a development phase, involving representatives from 12 schools, the service was delivered as a pilot in 32 schools (14 primary, 16 secondary and 2 special schools) between September 2015 and July 2016. The aim of the evaluation was to establish: whether the intervention is feasible to deliver; whether it has promise in terms of changing teacher attitudes and behaviour; and whether the service is suitable for evaluation in a randomised controlled trial.

Key conclusions

1. Demand was at the upper end of expectations: 192 users from the 32 schools (around 9% of teachers) posted a question over the year of the pilot. Sixty percent of teachers who responded to the survey indicated that they used the service to ask a question or to read the responses.
2. The majority of users who responded to the survey had a positive experience of using the E4F service. They were satisfied with the quality of the answers provided and found the E4F website easy to use. The most common topics that users had evidence-based queries on included: pupil engagement and behaviour, developing independent thinking, differentiation, literacy, and feedback and monitoring pupil progress.
3. Users considered that there were benefits to using the E4F service, particularly in terms of providing opportunities for research discussion; increasing their interest and enthusiasm for research evidence; improving their schools' use of research evidence; and (although to a slightly lesser extent) helping to improve their practice in the classroom and pupils' learning.
4. The pilot identified a number of potential improvements needed to the service, including faster responses for teachers, better promotion of the brokerage role, and facilitation of greater direct dialogue between the teachers and researchers
5. Although there are signs that E4F is starting to make a difference to research engagement, it is not be suitable for a randomised controlled trial (RCT) measuring impact on pupil outcomes. The service is responsive to the questions teachers ask, which this pilot found to cover a wide range of subject areas, making pupil outcomes a challenge to measure using administrative data.

What are the findings?

Senior leaders and teachers were most positive in reporting that using E4F helped to improve their schools' approach to using research evidence and that it gave them opportunities to discuss research evidence with others. In addition, although to a slightly lesser extent, they felt it helped to improve their teaching. However, a large minority (up to a fifth) did not feel there was evidence of benefits to pupils' learning. Interviews with teachers indicated that one of the reasons for this response was that, at the time of the questionnaire, it was too early to say if the changes in classroom practice translated to pupil outcomes.

Users considered the E4F service had made a positive difference particularly to their interest in and enthusiasm for using research evidence; their awareness of new techniques and approaches to applying this in their teaching; and their understanding of new ideas, knowledge and information. In addition, although to a slightly lesser extent, they felt using E4F had made a difference to: their practice in the classroom; their pupils' learning; and their schools' policies and plans for using research evidence. It is worth noting that the teachers that responded to the survey may not be representative of the views of all the teachers in the 32 pilot schools. In terms of impact on teacher attitudes and behaviour, two standard 'Research Use' factor measures analysed in the baseline and follow-up surveys had mixed results, with low reliability. These were incorporated into this study to assess whether they would be suitable measures to use in any future evaluation of E4F. Research-use measures would require further development for use in a future trial of E4F.

The majority of users and academics who took part in the evaluation were positive about their experience of E4F. Users were satisfied with the quality of answers provided. The majority considered that the E4F website was easy to use and that using the service was an effective use of their time. For future implementation, providers need to focus on increasing the speed of providing answers, enhancing awareness of the brokerage role, and encouraging greater dialogue between teachers and researchers.

Although there are signs that E4F is starting to make a difference to research engagement, it would not be suitable for a randomised controlled trial (RCT) measuring its impact on pupil outcomes, even when it is more developed. There are two main reasons for this. First, it is an intervention which needs to be flexible and responsive in the way that it operates. This makes it difficult to design an effective RCT. Second, it would be difficult to define a measure of pupil-level impact to capture the effect of the intervention across primary and secondary schools and a wide range of subjects.

How was the pilot conducted?

This was a mixed-methods evaluation, designed to reflect the formative nature of a service at an early stage of development and implementation. A development phase involved the collaborative development of a Theory of Change and monitoring information (MI) tool, interviews with developers and discussions with developer schools, and questions in NFER's Teacher Voice Panel survey to establish any wider demand for the service. The pilot phase involved baseline and follow-up surveys with staff in the 32 pilot phase schools, in-depth interviews in seven schools, interviews with research experts, and collection of MI and cost data. A range of schools took part in terms of phase, geographical location and disadvantage as indicated by Free School Meals indicators. However, this was not a random sample of schools because all the schools involved demonstrated agreement and enthusiasm to take part in the pilot.

Summary of pilot findings

Question	Finding	Comment
<i>Is there evidence to support the theory of change?</i>	Yes – in terms of formative findings	There was evidence which identified perceived benefits and positive outcomes from using E4F but it should be noted that a large minority (around a fifth) of respondents did not report evidence of pupil learning improvements. Interviews indicated that this was because it was too early to say whether pupil outcomes were improving.
<i>Was the approach feasible?</i>	Yes as a pilot. Mixed going forwards	Although the majority of users and academics were positive about their experience of using the service, further development is needed to increase the speed of providing answers, enhance awareness of the brokerage role, and encourage greater dialogue between teachers and researchers.
<i>Is the approach ready to be evaluated in a trial?</i>	No	E4F is not suitable for trial because it does not offer a defined outcome measure for pupils. It may be possible to use the Research Use factor measures as secondary outcomes, but results for the two measures tested in this study were mixed and work would be needed to develop Research Use measures before a future trial.

Introduction

This study aimed to evaluate the development and pilot of Evidence for the Frontline (E4F), a brokerage service aiming to support schools to engage with, and use, research evidence more effectively. The project aligned with the Education Endowment Foundation's (EEF's) theme on research use in schools, and was informed by the EEF's previously funded round of projects on Research Use.

The development phase of E4F took place in the summer term 2015 and the service was piloted during the academic year 2015/2016.¹ The study was underpinned by a theory of change which was developed collaboratively by the NFER evaluation and E4F project teams (see Appendix A).

Intervention

E4F is a new brokerage service developed to support schools to engage with, and use, research evidence more effectively. The service aims to signpost teachers and school leaders to relevant evidence on what works in supporting pupils' learning. During the pilot, the service asked teachers to develop their own questions about teaching and learning, and a broker then put them in touch with relevant evidence experts, or highlighted existing evidence resources or syntheses, or answers already provided via the service. A broker supported teachers and schools to frame and publish their queries and established an initial contact between a teacher or school and a research academic. The service was mediated through a bespoke web-based interface which was set up during the development phase of the project.

The service was developed by a core team involving a lead school (Sandringham School) and a university research centre (the Institute for Effective Education, IEE, at The University of York—referred to throughout the report as 'the core E4F team'), with support from the Coalition for Evidence Based Education (CEBE).

The project had two main phases:

- A development phase (April–August 2015) during which representatives from the 12 developer schools recruited by the core E4F team attended three workshops led by the E4F core team to help design and shape the service. The developer schools included five primary, six secondary, and one special school—mainly from the home counties and London (in locations near the lead school) but also included schools in Warwickshire, Lincolnshire and Derbyshire. During this period, the E4F core team commissioned an IT company to develop a web-based interface for the service, and produced service guidance documents. The team also began to recruit research academics from a range of institutions, though further researchers were added throughout the pilot phase.
- This was followed by a pilot phase (September 2015–July 2016) during which school staff from 32 schools (the 12 developer schools plus a further 20 pilot schools) piloted the service. The pilot included 14 primary schools, 16 secondary schools, and two special schools spread across England, although almost half were from the Eastern Government Office Region (the

¹ It is important to note that the term 'pilot' in this context does not refer to a pilot trial, but rather to the testing out of a service with a group of schools in terms of feasibility and perceived outcomes. This study did not require a comparison or control group of schools.

same region as the lead school). Representatives from these schools attended a launch workshop in September 2015, and a progress workshop in January 2016 to provide feedback on the service to date and shape improvements.

Brokerage

It is helpful to set out some information about the brokerage element of the service. The E4F website states:

The aim of the E4F project is to act as an independent and authoritative broker of research information, and by supporting interactions between schools and researchers (sometimes termed 'matchmaking'). [...] Teachers submit questions and are matched with evidence resources, given advice by a university researcher, or put in touch with another school with relevant experience to help them to answer that question.

Over the course of its operation, the E4F service had two main brokers (one based at the lead school and the other at the University of York), with brokerage support from two further researchers based at York. The main brokers were recruited at the start of the project. One of the main brokers was an assistant headteacher with expertise in professional learning and research use in schools, and the other was a dissemination manager with expertise in research and research mobilisation. No specific training for the role of broker was provided.

The service originally set out to emphasise two key elements felt to be effective in knowledge transfer between research and the classroom: (1) linkage between knowledge or evidence and practice,² and (2) dialogue and interaction between teachers and researchers. According to the literature, social interaction forms one of the key elements of effective knowledge transfer, but effective linkage or brokerage is one of the least well researched areas (Becheikh *et al.*, 2009; Nelson and O'Beirne, 2014). The E4F service itself was conceived, in part, in order to include these two features—linkage and dialogue—to support schools' research engagement and usage.

Recruiting schools

Further details about the recruitment of schools are provided in the Methods section ('Recruitment') and the Findings section ('About the participants'). Copies of the recruitment letters sent by the E4F core team to schools in the development and pilot phases can be found in Appendix B. Each participating school identified a 'school champion' to act as the main point of contact between the E4F team and his or her school throughout the project. The school champion was also asked to be the main point of contact for the evaluation team at NFER. A range of staff were nominated as school champions—although most were senior leaders or those already designated with some research responsibility (for example, a school research lead, or senior leader in charge of continuing professional development, 'CPD'). The school champion's role included promoting the service to other staff (in staff meetings, for example, or by combining with CPD plans for the year), attending workshops, and encouraging staff to take part in the evaluation.

² 'Linkage' is where evidence is translated for use in practice, usually mediated via intermediaries (see Nelson and O'Beirne, 2012; and Becheick *et al.*, 2009). In E4F, the brokerage function was conceived as part of the linkage process to help ensure questions were framed appropriately and matched to relevant academics.

Recruiting research academics

In the development phase, the brokers recruited an initial group of research academics that had relevant skills. Further researchers were added in response to teachers' question areas. Researchers were selected on the basis of their ability to provide an authoritative perspective on a particular educational issue relevant to the question or enquiry and based upon evidence from appropriate research studies. Researchers were supportive of evidence-informed practice, specialists in the particular subject or field, and could meaningfully link their research findings to classroom practice in an engaging way. Many had long-standing expertise in educational research. They were identified from existing contacts of the organisations involved (the IEE, Sandringham School, CEBE, and the EEF) as authors of relevant research, and from other sources—such as a search of the education strand of recent REF 2014 impact case studies. The recruited academics included those from a range of institutions including the universities of Oxford, Manchester, Exeter, Birmingham, Plymouth and Cambridge, as well as some consultancy firms. Appendix C provides a list of the researchers involved.

Developing and piloting the service

A number of iterative adjustments were made to the service during the development phase. Developer school representatives wanted the service to provide both an in-depth evidence base (for example, with a range of evidence sources and resources) and summaries for practical application (for example, a one-page template that academics could fill in to provide examples of how to apply the evidence-based findings in practice). They also wanted the opportunity to view questions and answers from other users and for the online facility to provide some commenting or discussion features. They anticipated that enquiries from schools would be specific (including context specific) rather than general. For example, 'Is there any research into how weaker students can be best supported in mixed ability classrooms when following a mastery curriculum in mathematics', rather than 'What's the evidence around mixed ability teaching?'. The core E4F team used the developer school suggestions to commission a web-based interface for the pilot service.³ This was a bespoke website which participants accessed through a user account.

While most of the developer phase suggestions were incorporated into the pilot service, the full summaries for practical application were felt by the core E4F team to be beyond the scope and budget of the pilot service and were not actioned. Instead, where possible, each research resource added to the E4F website included a short set of bullet points featuring recommendations for practice. The section on recommendations for practice was usually put together by the person who added the resource (that is, a member of the E4F team or an individual researcher). Generally, the kind of research being used in E4F had a focus on practical application, and hence producing 'recommendations for practice' was perceived as manageable by brokers who commented on this task. For example, in many cases, conclusions and recommendations in the research publications being suggested by academics or brokers could be readily summarised or paraphrased. However, where research publications were more detailed, brokers found it more difficult to summarise a straightforward set of actionable recommendations for practice. In these cases, brokers instead suggested some ideas about how the research might be used. As well as research publications, other resources added to the E4F website included blogposts and videos. No practice recommendations relating to these sources were made as they were already focused on actionable application.

³ <http://www.evidenceforthefrontline.com/>

The pilot service was managed by the lead school and the IEE. The main broker, based at Sandringham School, was supported by an evidence manager at the IEE. One of the IEE's main responsibilities was recruiting researchers who were well-equipped and willing to respond to the questions.

A project liaison group supported the core E4F delivery team throughout the pilot (see 'Project team' section on page 9). The group provided advice and acted as a 'sounding board' rather than giving a direct steer to the core team. The core E4F team sent newsletters to participating schools during the pilot (twice in 2015/2016, and once in 2016/2017). The project also included a series of dissemination events where the E4F team provided an overview of the service, and where teachers and schools presented case-study examples of their experiences of using the service. Events in 2016 included 'networkED' (20 February, Cheltenham), 'researchED' (27 February, Somerset), 'Using STEM Research Conference' (part of the National STEM Learning Network, 20 May, York), 'Festival of Education' (23–24 June, Berkshire), a dedicated E4F conference at University College London (UCL) for teachers and researchers (16 June), and 'researchED' (9 July, York).

In summary, E4F went through a development phase in which the service was established, a bespoke website to mediate the service was created, and schools and research experts were recruited (April–August 2015). The service was then delivered in a pilot phase where teachers posted evidence-request questions, brokers mediated or supported the questioning, and research experts provided teachers with evidence-based answers to their questions (September 2015–July 2016). The service was designed, developed, and implemented as a pilot within the space of one and half academic years. When talking about the challenges and successes of E4F, an E4F core team member felt this had exceeded expectations: '*[We have] set up and delivered a service much more rapidly than I had [ever] really hoped for*'. Appendix D contains a screenshot of the E4F service website.

Background evidence

The drive to ensure that policy-making and practice is evidence-informed can be seen in the DfE's White Paper 'Educational Excellence Everywhere' (2016). This gives a commitment to fostering a world-leading, evidence-informed teaching profession, stating that: 'We will increase teachers' access to and use of high-quality evidence, ensure teachers are trained in understanding and applying evidence ...' (p. 37). The DfE explains that it will 'continue to work with the Education Endowment Foundation (EEF) to expand its role in improving and spreading the evidence on what works in education [...] Its remit will be formally expanded to support evidence-based teaching' (p. 39). The White Paper highlights the importance of building evidence into education, drawing on a report it commissioned by Goldacre (2013) which concluded that: 'There is a huge prize waiting to be claimed by teachers. By collecting better evidence about what works best, and establishing a culture where this evidence is used as a matter of routine, we can improve outcomes for children, and increase professional independence' (p. 7). Use of evidence is particularly important given the shift in the last five years to a more autonomous self-improving school system, where schools are responsible for driving continual improvements in their performance. The impetus to use evidence effectively in public service development and delivery comes from several sources, including intellectual consideration and analysis of how knowledge is generated, transferred and applied, and policy drivers to ensure that policy-making and service delivery are informed by reliable and robust evidence. Nutley, Walter and Davies (2007) have made a major intellectual contribution to the understanding of how knowledge and evidence are used in the public policy domain. Their analysis of the flow of information reveals that it is a complex social process which can take many pathways that may facilitate or impede how knowledge and evidence are used. They maintain that organisations can enhance knowledge-transfer and evidence-use by developing an information-rich culture which includes implementing defined approaches to information-sharing such as regular updating and training.

However, there are challenges to achieving a culture change such that schools use evidence routinely to inform their teaching approaches and practices. For example, Griggs *et al.* (2016) note the gap between the availability of research evidence and its use in professional practice. They refer to several studies which suggest that more effective knowledge mobilisation and ways of addressing barriers are required. The barriers schools face in adopting evidence-informed practice identified by Griggs *et al.* (2016) are skills issues relating to the interpretation of research findings, resource issues such as lack of time, and 'insufficient rewards in the system' (p. 7). Durbin and Nelson (2014) assert that a system-wide change is needed to achieve the effective use of evidence in the classroom. They maintain that this includes improving the supply of evidence by translating research evidence for application in practice and creating demand by facilitating teachers to make use of the evidence available. Durbin and Nelson (2014) suggest that there is a key role for school leaders and governors in making school environments conducive to evidence-informed practice by providing time for teachers to assess and use evidence, and providing training to develop their skills in interpreting, assessing and using research evidence effectively. At the same time, they observe that teachers are often under pressure to deliver examination results which may be a barrier to their using evidence on a regular basis. Durbin and Nelson (2014) conclude that engendering teachers' demand for research evidence requires certain conditions where teachers 'need *motivation* and *opportunity* to do so. They need to believe in its value in informing and improving practice and must trust that it does not undermine their professional autonomy' (p. 2).

Another challenge in attempting to close the gap between the supply of, and demand for, research evidence involves preparing the evidence in order to facilitate its use by teachers. Nelson and O'Beirne (2014) throw light on the critical role of transforming evidence for practice. They explain that this transformation is not only about turning research findings into teacher-specific resources but also about 'the importance of social interaction between researchers and teachers (sometimes via intermediaries) to help mediate research messages and help teachers develop strategies for implementation, monitoring and review' (p. 37).

Against this background, the rationale for setting up and piloting the E4F service was to ascertain whether a mediated brokerage service facilitates schools' use of research evidence in teaching and learning. The purpose of the evaluation was to examine whether E4F achieves an effective interface between teachers requesting research evidence via questions submitted to the service broker and experts supplying evidence. The evaluation aimed to find out what worked well in the delivery of E4F, and why and which aspects, if any, could be improved.

Research questions

The evaluation aimed to answer the following questions:

- **Does the intervention show evidence of promise?** What are the perceived outcomes from the service for school leaders and teachers in terms of attitudes and school culture in relation to research engagement and research use? What changes, if any, do teachers and school leaders make to classroom or school practice? How do these changes reflect the theory of change for the service?
- **Is the intervention feasible to deliver?** What are the key effective features, and what are the challenges or barriers in terms of the design, management, and delivery of the evidence brokerage service? Is there demand from schools for an evidence brokerage service? Is there sufficient supply of evidence expertise? How do the evaluation findings inform the service's future design and implementation?
- **Is the intervention ready to be evaluated in a trial?** What suitable outcome measures could be considered in any future pilot trial of the service? What parameters would be needed in a trial?

These research questions were drawn up in consultation with the EEF to reflect the early development stage of the E4F service. The evaluation focused on feasibility and evaluating service-users' experience of the service rather than outcome measurement. However, one of the objectives was to consider whether any outcomes relating to 'research use' could be measured pre- and post-use, either at an individual or aggregate school level. In order to assess this, the NFER team incorporated elements of a standard 'research use' measurement tool into the study questionnaires. This tool was developed by another team at NFER to be used across all projects in the EEF's 'research use' round (Poet *et al.*, 2015 unpublished).

Ethical review

The evaluation protocol underwent an ethical review through NFER's code of practice procedures. This took place at project start-up, in April 2015.

We asked school champions to sign a memorandum of understanding (MoU, see Appendix E) as they joined the pilot. This set out their roles and responsibilities as part of the evaluation. These included circulating the NFER baseline survey link to their staff in September 2015, and encouraging staff to respond. We sent written information to the headteacher and school champion prior to the baseline survey and collected names and email addresses at baseline, for the purposes of follow-up only. We sent written information to all individual teachers (baseline respondents and service users) prior to the follow-up survey.

We also received monitoring information (MI) data from the E4F core team relating to service usage. This contained individual-level data. The data was passed on via a secure portal that only the NFER core team and the IEE Manager could access. The E4F website included an opt-in consent statement for all users at 'account activation' stage to give permission for their usage data to be collected and passed by the E4F core team to NFER. This stated: 'I agree with my information being shared with the National Foundation for Educational Research'. Information about named data was also included on the school champion's MoU (see Appendix E).

Ahead of interviews, NFER asked for consent to record the conversation. All questionnaires included a data protection and data usage statement (see Appendix G).

Project team

The development and pilot project was led by an Assistant Headteacher (Caroline Creaby) at a lead school (Sandringham School) in conjunction with an Evidence Manager (Jonathan Haslam) from the Institute for Effective Education (IEE) at The University of York. They were supported by members from CEBE, and a small project liaison group which involved three members from the CEBE steering group.⁴ The E4F core team were responsible for recruiting schools to the development and pilot phases. They were also responsible for collecting monitoring information (MI) and providing this to the NFER evaluation team. NFER and the IEE drew up a monitoring data specification collaboratively (see Methods section, 'Monitoring Information').

The independent evaluation team was led by Pippa Lord, Senior Research Manager in NFER's Centre for Evaluation and Consultancy. David Sims, Research Director at NFER, directed the project. They were supported by Dr. Richard White (who led on the qualitative interviews with schools), Palak Roy (statistician), Adam Rabiasz (statistician), Sally Bradshaw (statistician) and David Hereward (who

⁴ The project liaison group included Estelle Morris (Labour peer), Andrew Morris (Chair of the CEBE steering group), and David Turrell (Chair of the National Baccalaureate Trust).

led on the survey administration). Dr. Ben Styles, Head of NFER's Education Trials Unit, provided advice on the suitability of the service for trial. The evaluation team was responsible for the design and delivery of the evaluation, including collaboratively developing a theory of change with the E4F core team, attending project workshops, providing formative feedback during the development phase, administering baseline and follow-up surveys of teachers, conducting interviews with school and delivery staff, analysing service monitoring data, and analysis and reporting.

Methods

Overall evaluation design

The overall approach was a mixed-methods evaluation, designed to reflect the formative nature of a service in its early stages of development and implementation. The project and evaluation design was split into two phases: a development phase, and a pilot phase.⁵ The key methods and activities involved in each phase are set out below. In addition, Appendix F sets out the main data sources used in the study and how they contributed to the evaluation. Note, all schools that took part in the project—the pilot E4F service—were also expected to take part in the evaluation.

Development phase (12 schools)

This stage included:

- the collaborative development of a theory of change and a monitoring information (MI) tool;
- initial telephone interviews with the core service developers (three interviews);
- questions in NFER’s Teacher Voice Omnibus survey to explore wider demand;⁶
- the collection of recruitment information from the E4F core team; and
- an exploration of service development at a developer workshop, and the provision of formative feedback from NFER to the service developers—the core E4F team and CEBE.

Pilot phase (32 schools)⁷

This stage included:

- baseline and follow-up surveys of staff in pilot phase schools (for up to four members of staff per school at baseline, and inviting all baseline respondents and all users of the service to take part at follow-up—see Findings section for achieved number of respondents);
- in-depth telephone interviews with school staff in seven schools;
- exploration of key learning at a pilot phase workshop;
- telephone interviews with five research experts;
- telephone interviews with three low- or non-users of the service;
- collection of MI data and costs data; and

⁵ It is important to note that the term ‘pilot’ in this context does not refer to a pilot trial, but rather to the testing out of a service, and exploring evaluative feedback and perceived outcomes with service users.

⁶ The EEF commissioned a small number of questions to be included in NFER’s summer 2015 Teacher Voice Omnibus survey as a separate commission alongside the E4F evaluation. NFER’s Teacher Voice survey runs three times a year. Each survey is completed by at least 1,000 primary and secondary school teachers in England. The panel includes teachers from a full range of roles and years’ experience in primary and secondary schools; coverage is comparable with the population of teachers in England by phase of education.

⁷ Note, the pilot phase included the 12 developer schools and 20 pilot schools.

- summary telephone interviews with the core service developers (three interviews).

The overall design allowed for both a formative and summative evaluation, including the gathering of feedback from users on their experiences, as well as their perceptions of emerging outcomes. As noted in the Introduction, we also took the opportunity to ‘road test’ some outcome measures from a newly-developed standard ‘Research Use’ survey instrument, as part of assessing the project’s potential for measurement in any future trial. We present the following elements of the methodology in more detail below: surveys, school interviews, other interviews, Teacher Voice Omnibus Survey, monitoring information, and collecting costs data.

Recruitment methods to the pilot

The core E4F team (rather than the evaluation team) was responsible for recruiting schools to the development and pilot phases of the project. They intended for 11 schools to take part in the development phase, and a further 20 in the pilot phase. The rationale for these sample sizes related to capacity to develop and manage the pilot service. The aim was for the sample to include:

- primary and secondary schools, as well as a small number of special schools;
- schools with both higher and lower than average levels of school-level free school meals (FSM) and Pupil Premium percentages;
- schools with a range of Ofsted results (from ‘Outstanding’ to ‘Requires Improvement’); and
- schools from both urban and rural areas of the country.

There were no strict quotas, but the E4F core team, in discussion with the EEF, felt that in the development phase the 11 schools should typically comprise five primary schools, five secondary schools, and one special school, and that the pilot phase should scale up by adding 20 more schools (for example, ten primary and ten secondary). That said, the main eligibility criterion was agreement from recruited schools to participate in the pilot. Indeed, in the event, 12 schools took part in the development phase (an additional secondary school joined the development phase due to staff expertise and interest which was considered useful to the project), with a further 20 at pilot (see Findings section: Participants—‘schools involved’ for further details about the characteristics of the developer and pilot schools).

The core E4F team used a number of strategies to recruit schools. During the development phase, these included inviting schools known to the lead school (such as partners in a local Teaching School Alliance) and those known to the project liaison group. In total, 18 schools were approached in the development phase: six declined, 12 (including the lead school) took part. During the pilot phase, wider strategies included: promoting the pilot to existing contacts (such as schools known to the lead university via regular newsletter); promoting the pilot via the lead school’s Twitter account; and using school contacts known to the project liaison group. Note that of these, the IEE’s newsletter email prompted some schools to express interest in the pilot, whereas Twitter generated relatively little interest. Most schools were engaged through networking. In addition, one school contacted NFER to express an interest in joining the pilot in response to NFER’s web information sheet posted during the development phase of the project. NFER passed this contact on to the E4F core team and they were recruited to the pilot phase. In total, 29 schools were approached for the pilot phase: nine declined, 20 took part. Reasons for declining to take part in the development and pilot phases included lack of staffing capacity, new leadership in place, and poor GCSE or A-level results in the previous summer which altered the school’s priorities. The invitation letters sent by the E4F core team to developer and pilot phase schools are included in Appendix B.

One of the pilot schools dropped out just prior to completing the baseline questionnaire ahead of the launch in September 2015. Some rapid contacting by the E4F core team meant another school came on board for the launch. NFER kept the baseline survey open for that school to allow them to complete questionnaires on and just after the launch day. The section on 'Findings: Participants' provides further information on the schools recruited to the study and on the participants who completed the questionnaires.

Each school nominated a school champion to be the key point of contact for the pilot and evaluation. In September 2015, the school champion was asked to forward NFER's email invitation to all their leadership and teaching staff (including teaching assistants) in order to recruit respondents to the baseline survey (see the section below on Data collection: 'Surveys'). In June 2016, NFER recruited staff to the follow-up survey via the contact email address respondents had supplied at baseline, and via the email address service users had provided to logon to the E4F service. Details about consent procedures are provided in the Introduction Section on 'Ethics'.

In order to recruit teachers and school leaders to interviews, NFER discussed this strand of the evaluation with school champions at a workshop in January 2016. Some Champions expressed support for their school taking part in the interviews, and we noted them on a list of potential volunteers. We then identified a short list of schools using a stratified sampling approach in February–March 2016, following which schools were recruited as interview case studies. The section below on Data Collection: 'School interviews' provides further details of our interview methods. This study did not involve pupils.

Data collection

Surveys

Owing to the formative nature of the service, the surveys were designed to focus on gathering evaluative feedback from service-users, including questions regarding their experience of using it, such as level and nature of usage, and experiences of brokerage and the provision of answers from experts. However, we also wanted to capture any early indication of the benefits and outcomes resulting from usage of the service, for example whether teachers had made any changes in the classroom or felt their teaching had improved as a result of the evidence they had been provided with. In addition, we wanted to explore whether the service had the potential to impact positively on teachers' engagement with, and use of, research. We therefore designed the surveys with three banks of questions: the first to gather evaluative feedback on the service, the second on perceived benefits and outcomes, and the third to assess impact using a selection from a standard tool developed by another team at the NFER for use in all the EEF 'research use' evaluations (Poet *et al.*, unpublished). Copies of the baseline and follow-up surveys are included in Appendix G.

The surveys were administered online by NFER to school leaders and teachers in all 32 pilot phase schools. A letter was sent to the headteacher in each pilot school informing them of the survey. At baseline, the school champion in each school acted as the main point of email contact, and then they emailed the link to all staff in their schools. At baseline, two email reminders were sent to the school champions. At follow-up, an individual email invitation containing a link to the survey was sent to every baseline respondent who had provided a contact email address for this purpose, and to every user of the E4F service who had agreed to their contact details being passed to NFER for this purpose. At follow-up, two rounds of telephone reminding took place at a school level, and three email reminders were sent to individuals. The baseline survey took place in the first three weeks of term, in September 2015—importantly, ahead of the launch (to replicate a baseline survey ahead of randomisation and service use in a trial). The follow-up survey took place in June and July 2016.

School interviews

We conducted interviews with school staff in the late spring and early summer term of 2016. The aims of the interviews were to explore their experiences of using the service, as well as any resulting outcomes and impacts. The timing of these interviews—in the latter stage of the pilot phase—was important as it gave time for any evidence-exchanges to feed through into changes in attitudes or classroom practice.

We sampled for the case studies based on a number of variables including:

1. level of usage of the service as seen in the December MI data—we sampled for high levels of usage, including schools where individuals had used the brokerage service a number of times (for example, one individual had posted five questions), and schools where a large number of individuals were using the service (for example, in one school 27 staff had posted a question);
2. a range of personnel using the service as seen in the December MI data—we sampled for schools where a range of individuals with different roles and responsibilities were using the service, for example a school champion, classroom teachers, and support staff;
3. school phase—we sampled to include a range of primary and secondary schools, and a special school; and
4. geography—we sampled to cover schools in the north and south of England, and in urban and rural locations.

We drew up a short list and reserves. We also sampled some schools with medium or low engagement so that we could conduct a small number of interviews with low- or non-users.

We conducted in-depth interviews in seven schools, as planned. In each school, we interviewed up to three members of staff (always the school champion, and then selecting from other staff as relevant, such as a classroom teacher, a senior leader, support staff). The interviews covered: the school context and approach to E4F; individuals' experiences of using the E4F service; perceived outcomes from using the service—including whether this had impacted on teachers' practice, pupils' learning, and schools' use of and engagement with research; challenges and barriers to using the service; and any recommendations for further development.

We recorded all interviews digitally with participants' permission (see the Introduction section on 'Ethics' for the consent procedures followed). Interviews were summarised in a standard template and then transferred to a semi-structured school-level template in order to create a school practice profile. Participants were told that they would remain anonymous, but that their school might be identifiable in any vignettes presented from their school-level file.

Other interviews

In addition, we interviewed three non- and low-users of the service, and five research academics. In order to ensure we spoke to academics who had been involved from a range of institutions, we applied the following selection process:

- We were provided with a list of 33 research academics by the E4F core team, however, the MI data did not collate information by research academic.
- In order to obtain level of involvement, we hand-searched each academic on the E4F website to record how many questions they had answered. (While this did not necessarily provide a full picture of their involvement—for example some questions may have been in progress and

not yet published—this approach provided a manageable way of identifying those who had been involved and could be invited to share views on brokerage and providing answers.)

- We organised the academics by institution and by number of questions answered to create a longlist of invitees. Where multiple researchers from the same organisation were engaged, we invited the researcher who appeared to be most involved (according to the number of questions answered). We excluded those individuals closely related to the EEF or the IEE to avoid any bias. We wrote to a longlist of 14 researchers, from which five took part in the interviews.

Teacher Voice

As part of another commission by the EEF, we included four questions in NFER's Teacher Voice Omnibus survey in June 2015 (during the development phase and before the pilot service was launched) in order to explore wider demand for an evidence brokerage service.⁸ Respondents were provided with the following information about the service:

The Education Endowment Foundation is funding a service to support schools to engage with and use research evidence more effectively. The brokerage service, Evidence for the Frontline (E4F), will signpost teachers and school leaders to relevant evidence on what works in supporting young people's learning. It can also put schools in touch with evidence experts or other schools working on the same issue. The service is being developed by schools (led by Sandringham School, with the Institute of Effective Education and the Coalition for Evidence-Based Education), for schools.

They were then asked the following questions:

- How interested are you in using this service? (very, quite, slightly, not, don't know)
- How frequently in an academic year do you think you might access this service? (weekly, half termly, termly, annually, don't know)
- What topic areas would you be likely to seek out evidence on through the service? (up to 3 areas)
- When engaging with this service, which of the following approaches would you find useful? (including being able to contact the service by: telephone, email, mobile phone app, Twitter, a dedicated website; and having my question answered by an academic researcher, by staff in another school, with links to resources and research evidence).

A panel of 1,430 practising teachers from 1,201 schools in the maintained sector in England completed the survey between 5 and 10 June 2015. The panel included teachers from the full range of roles in primary and secondary schools, from headteachers to newly qualified class teachers. (Note, the Teacher Voice panel does not include representation from special schools.) A total of 51% (724) of the respondents were teaching in primary schools and 49% (706) were teaching in secondary schools.⁹ We have drawn on the findings from this wider sample in the Feasibility section of this report.

⁸ Note, this work was a separate commission by the EEF, outside of the evaluation grant arrangement, but formed an integral part of the methodology for this evaluation in order to explore wider demand.

⁹ A separate unpublished results and technical report has been provided to the EEF as part of the Teacher Voice work. This includes breakdowns by phase and respondent type. It also explains how generalizable the results are

Monitoring data

In order to explore the level and nature of usage of the E4F service, we developed a monitoring data specification in collaboration with the IEE. Both the IEE and ourselves aimed to request data that could be readily collated via the E4F website analytics rather than through costly manual collation (although in the event, some manual inputting was required). Data fields about service users included: name/ID, role/position, question(s) asked, keywords relating to question(s) asked, brokerage/brokered by, date of questioning, time taken to answer/date of answer, and outcome (for example, answered by research expert, signposted to existing resource, signposted to existing answer). The E4F team collated the data on a spreadsheet, with one row per question (rather than one row per person). We decided that the unit of analysis would be the question, from which we could then report the number of questions asked, the nature of questions asked, and who they were asked by. From the data, we could also see where individual users had asked a number of questions (i.e. we could identify multiple questioners) and, hence, we could also report the number of people posting questions and their roles.

Monitoring Information data in the report

We have drawn on the MI data results in the Feasibility section of this report. To signpost this data, we have presented it in highlight boxes where relevant.

Collecting cost data

Questions to gather information on the costs of being involved in the E4F pilot were included in the school-level interviews with school champions. In addition, we collected detailed cost information from the service developers. Our estimate of the cost of the pilot service separates out the up-front development phase costs (such as workshops and IT-development) from pilot delivery costs (ongoing costs). We also describe service-user costs and time. To date, service use has been at a school and individual teacher level. Service use has not yet benefited pupils' learning more widely, thus it is premature to calculate a cost per pupil of the service (see section Readiness for Trial: 'Costs').

Theory of change

A 'theory of change' discussion was held with the E4F core team in April 2015 to identify the main purpose of the pilot, underlying assumptions, target groups, strategies and activities, and intended outputs and outcomes from the service. The theory of change was informed by existing evidence on research use and engagement, as set out in the background section of this report (for example, Becheikh *et al.*, 2009; Nelson and O'Beirne, 2014, and Durbin and Nelson, 2014). It also took into account the wealth of research on models of changing teacher practice, and that it takes time for CPD and teacher-focused interventions to embed in teaching and learning and ultimately in pupil outcomes (for example, Harland and Kinder, 1997; Cordingley *et al.*, 2005). As the service was in an early stage of development, and this was a feasibility study, the NFER and E4F team decided a full logic model was not appropriate for this study. Instead, the theory of change was used by the evaluation team to guide instrument design and the gathering of formative feedback throughout the study. The theory of change is set out in Appendix A.

to the population and schools and teachers in England, and any weightings applied to the data. As part of the Teacher Voice contract, this is supplied to clients only.

Outcome measures

In order to evaluate the suitability of some standard outcome measures on 'Research Use', we prioritised two outcome measures from the NFER standard EEF Research Use tool (Poet *et al.*, unpublished) that we could incorporate in a relatively streamlined way into the survey.¹⁰ We used Measure 3, 'Perception that academic research is not useful to teaching', and Measure 4, 'Perceptions that own school does not encourage use of academic research'. Note that the technical report explaining these factor measures is to date unpublished so as not to bias any current Research Use evaluations. However, for information, Measure 3 comprised two items: 'I do not believe that using information from research will help to improve pupil outcomes', and 'Information from research conducted elsewhere is of limited value to our school'. Measure 4 also comprised two items: 'My school leaders/governors do not encourage me to use information from research to improve my practice', and 'Other staff in my school rarely use information from research to inform their teaching practice'. For all four items, five response categories and their respective assigned scores were: strongly agree (5), agree (4), neither agree nor disagree (3), disagree (2) and strongly disagree (1). Note that missing data was given a score of three. This meant that for each of these measures, the possible total score range was 2–10. The scoring scales have not been switched and therefore higher scores meant agreeing to negatively phrased statements and hence an overall negative response for the measure. Table 7 in the section on Findings, 'Evidence to support theory of change', provides details of the Cronbach's alpha internal reliability score and the mean scores and standard deviations for these measures, at baseline and follow-up. Appendix H provides the item-level statistics for these measures.

We focused our analysis on separate time points—(1) the baseline cohort of responses (N = 515), and (2) the follow-up cohort of responses (N = 171). The main outcomes are presented using descriptive analysis and frequencies at each time point. In addition, we have conducted paired sample t-tests for the outcome measures with the sub-sample of respondents who completed the survey at baseline and follow up (N = 114), and present responses by phase, free school meal banding, and level of seniority of respondent to explore any differences. Statistical significance was assessed at the 5% level ($p < 0.05$). Note, where N is greater than 100, we present the percentage and N; where N is less than 100, we present N only, with the exception of Tables 5 and 14 where N is 95 and we do show the percentages.

It is worth noting that while the overall number of respondents at follow-up was 171, because of routing, responses to some questions were received by a smaller number of respondents. Hence, descriptive results and N are the main focus of reporting. All analysis was conducted in IBM SPSS Statistics for Windows 21.

¹⁰ Note, for the integrity of the Research Use measures, all items constituting an outcome measure should be included in the survey for a measure to be valid. As our survey focused on evaluative questions about the E4F service, we had limited space for outcome measures and hence were unable to use all six outcome measures by including all constituent items. We had space to include the constituent items for two of the outcome measures.

Timeline

A detailed timeline of the evaluation activities is presented in Table 1 below.

Table 1: Timeline

Date	Activity
2015	
Feb–Apr	Developer schools recruited by E4F project team Construction of theory of change
May–Jul	Development phase began Teacher Voice Omnibus survey Three developer workshops to support the design of the service (NFER attendance and presentation at Workshop 2) Collaborative development by NFER and IEE of MI data collection tool Interviews with service developers Pilot schools recruited by E4F project team
Aug	Formative feedback on development phase
Sep	Pilot phase: baseline survey Pilot launch workshop (attended by NFER)
Oct–Dec	Pilot service began Interim MI data download
2016	
Jan	Pilot phase workshop (NFER attended and presented)
Feb	Schools sampled for interview phase
Mar–May	School telephone interviews
Jun–Jul	Pilot phase: follow-up survey Interviews with research experts Final download of MI data
Aug–Sep	Summative interviews with service developers Analysis and reporting

Findings

Participants

Schools involved

Thirty two schools were involved in the E4F pilot—12 in the development phase, joined by another 20 in the pilot phase (developer schools continued into the pilot phase). As noted in the Methods section, ‘Recruitment methods to the pilot’, the main criteria for becoming involved was that the school was willing to pilot the service and take part in the evaluation. The schools did not form a random sample, and were not recruited to be generalizable to all schools in England. That said, the core E4F team took efforts to recruit schools from different phases, different geographical areas, and with different levels of disadvantage as denoted by school-level free school meal (FSM) eligibility. The characteristics of the recruited schools are shown in Table 2.

Table 2: Characteristics of the developer and pilot schools

Characteristics	Developer	Pilot	Totals		
	N = 12	N = 20	N = 32	%	
Phase	Primary	5	9	14	44%
	Secondary	6	10	16	50%
	Special	1	1	2	6%
Percentage pupils eligible for FSM 2012/2013 (5 pt scale)	Lowest 20%	4	4	8	25%
	2nd lowest 20%	1	4	5	16%
	Middle 20%	1	5	6	19%
	2nd highest 20%	2	3	5	16%
	Highest 20%	3	3	6	19%
	Missing data	1	1	2	6%
Government Office Region	North East	0	2	2	6%
	Yorkshire & The Humber	0	2	2	6%
	East Midlands	2	2	4	13%
	West Midlands	1	0	1	3%
	Eastern	6	9	15	47%
	London	2	2	4	13%
	South East	1	1	2	6%
	South West	0	2	2	6%
	Missing data	0	0	0	0%
Ofsted overall effectiveness—how good is the school (from most recent inspection)	Outstanding	7	4	11	34%
	Good	3	10	13	41%
	Requires improvement	0	4	4	13%
	Missing data ¹¹	2	2	4	13%

Source: NFER Register of Schools for the E4F recruited schools. Percentages have been rounded to the nearest whole number and may not sum to 100.

Note, E4F schools were matched with NFER’s Register of Schools in autumn 2015 (when the schools were recruited) and at that time we used FSM bands from 2012/2013.

¹¹ Ofsted ratings for four schools were not available at the time of the pilot. For three, this related to converting to academy status or merging with other schools, before which their ratings had been: ‘Outstanding’ (two schools), and ‘Requires Improvement’ (one school). The fourth school was a new establishment under a multi-academy trust, awaiting its first Ofsted inspection.

Sixteen secondary schools, 14 primary schools, and two special schools took part in the E4F pilot. As shown in Table 2, across the 32 schools, six had Free School Meal (FSM) levels within the highest quintile nationally and eight had FSM levels within the lower quintile. Almost half of the schools were located in the Eastern Government Office Region (including some in the Home Counties with proximity to the lead school)¹² reflecting the local nature of recruitment by the lead school. However, other schools in the sample were spread across England. The majority of the 32 schools had ‘Good’ or ‘Outstanding’ Ofsted results in their most recent inspections, however five schools that took part were rated as ‘Requires Improvement’. Schools in this latter category felt able to join the E4F pilot, suggesting that research engagement may form part of school improvement priorities (at least for these schools).

Service users

MI data

According to Monitoring Information data supplied through the E4F website, a total of 192 users posted questions on the E4F site during the pilot period. Of these, 23 were school champions (indicating that not all school champions used the site to post questions) and 169 were school staff. In terms of seniority, most users were classroom-level teachers (74 of the 192 users, 39%); around a quarter were middle leaders (49 users, 26%), and a similar proportion were senior leaders (46 users, 24%). The service was targeted mostly at senior leaders and teaching staff, but other school members (such as teaching assistants and governors) could also use the service if they wished. Indeed, three teaching assistants and three captured as ‘other role’ by the E4F MI system used the service.

Participants involved in the surveys

A total of 572 individuals took part in the surveys (401 at baseline only, 57 at follow-up only, and 114 at both stages). Of these, a total of 515 took part in the baseline survey, and a total of 171 took part in the follow-up survey. Overall, the respondents were distributed well in terms of years of experience and job role. In addition, the respondent distributions at baseline and follow-up were similar, although the follow-up survey had a slightly higher proportion of staff in more senior roles and with a greater number of years in teaching.

In terms of the baseline survey, the number of respondents per school ranged from one to 51, with an average (mean) of 16 responses per school. Twenty nine of the 32 schools provided four or more baseline questionnaires (our design was for four respondents per school). Of the respondents who took part at baseline (515), a quarter were from primary schools (136, 26%), over two thirds were from secondary schools (361, 70%), and 18 (3%) were from special schools. (These proportions do not quite reflect the school phase proportions within the pilot group—the pilot involved 16 secondary (50%), 14 primary (44%), and two special schools (6%)—but do indicate the greater number of teachers in secondary schools compared with primary.) Among baseline respondents, just over a third were classroom teachers (193, 38%), a similar proportion were middle leaders (184, 36%), and a smaller number were senior leaders (78, 15%); 12% had ‘other’ roles, which included teaching assistants, student services managers, science technicians, and an examinations officer. The baseline survey respondents represented a range of experience in terms of length of time in teaching, including some in their first year of teaching (‘newly qualified teachers’, NQTs—36, 7%), and a small

¹² The ‘Home Counties’ refers to the counties surrounding London.

number with 30 years or more experience (27, 5%). Around a half had been in teaching for less than ten years, and a half for ten years or more.

In terms of the follow-up survey, we invited responses from all those who had responded at baseline and had a login to the service. As shown in Table 3, the overall response rate was 23%.

Table 3: Response rates to the follow-up survey

	Invited (N)	Responded (N)	Response rate %
Responded to baseline survey and had a login to the service	452	114	25%
Had a login to the service (but had not responded at baseline)	285	57	20%
Total	737	171	23%

Source: NFER E4F follow-up survey, summer 2016.

It is also helpful to consider the range of participants who took part in the follow-up survey (as our discussion of outcomes is based on this distribution of respondents). There were reasonably similar proportions of respondents by phase at follow-up as there had been at baseline: a quarter from the primary phase (42, 25%), just under three quarters from the secondary phase (127, 74%), although fewer from special schools (2, 1%). Of the 171 follow-up respondents, just under two fifths were classroom teachers (63, 37%), almost two fifths were middle leaders (66, 39%), and one fifth were senior leaders (31, 18%). There was a good distribution of length of time in teaching, with equal numbers of teachers (8, 5%) either in their first year of teaching, or having 30 or more years of experience.

Evidence to support theory of change

We developed measures for the outcomes from the E4F service with reference to the theory of change (see Appendix A). The measures reflected the following areas identified in the theory of change: changes in teachers' values, access to, and use of evidence; changes in teachers' classroom practice; and changes to schools' approach to engaging with and using evidence. In this section we present the evidence of outcomes in terms of:

- **perceived benefits** of using the service (for individuals, schools, and the wider research community);
- **perceived outcomes** across a number of areas (including awareness of research evidence, knowledge of research evidence, changes in teaching practice, changes in school culture, and learning outcomes); and
- **impacts** according to factor measure scores relating to Research Use in schools.

We draw on data and analysis from the baseline and follow-up surveys of teachers, and school case-studies which included telephone interviews with school champions, school senior leaders, and teachers.

What are the perceived benefits of using the service?

This section examines respondents' perceptions at baseline of the potential benefits of using the E4F service prior to using it and their perceptions at follow-up after using the service. The results are provided in Tables 4 and 5 below.

Overall, baseline respondents' perceptions were very positive in terms of the benefits they thought using E4F would provide. However, it is worth noting that a large minority (over a fifth) were not sure of the potential benefits of the service. This is understandable given that at baseline, respondents would not have been fully aware of what the E4F service might offer them. As Table 4 below shows, from the statements about benefits, baseline respondents were most positive about the potential for the service to 'improve [their] teaching': 62% agreed and 17% strongly agreed that this might be the case. 'Improving [their] school's approach to using research evidence' was another expected benefit, although not quite as strongly anticipated as improvements in teaching: 54% agreed and 15% strongly agreed with this statement. A majority of respondents also considered that using the E4F service would give them 'opportunities to discuss research evidence with others': 60% agreed and 13% strongly agreed with this statement.

Respondents' perceptions of benefits *after* using the E4F service were positive, although not as positive as their expectations prior to using the service (indeed, a higher proportion disagreed with each of the statements about benefits at follow-up than at baseline). As was the case for the baseline survey, a large minority of respondents to the follow-up survey said that they did not know whether using the service had achieved the benefits stated. Here it is worth noting that some case-study interviewees told us that there had not been sufficient time for usage of the service to result in concrete changes at the time of the surveys.

As Table 5 shows, nearly half (45, 47%) of the 95 respondents who answered questions on benefits in the follow-up survey indicated that using the E4F service had helped them to 'improve their teaching', while around a quarter said it had not helped, and about a quarter did not know.¹³ Some of the case-study interviewees, however, said they had not found time yet to reflect on and use the expert evidence they had received, which may explain the high proportion of 'don't know' responses. For example, a teacher noted that she had received several links to research papers which she had printed off but not yet had time to read in detail.

Teachers' responses regarding whether using the E4F service had 'improved their school's approach to using research evidence' were more positive, with 60% giving a positive response (43% agreed, and 17% strongly agreed). However, 19% reported that using the service had not helped in this respect, and another fifth did not know. In terms of providing 'opportunities to discuss research evidence with others', a large proportion (nearly three quarters) agreed or strongly agreed with this. Indeed, across the statements about benefits, follow-up respondents were most positive about this aspect of E4F, and less positive about improvements in their teaching. This emphasis is different to baseline expectations, and is perhaps indicative of the discussion features on the E4F website and also the way in which some schools piloted the service through whole-staff meetings and discussion.

¹³ This was a filter question, and was shown to all respondents who had used the service in some way (that is, answered 'yes' to either or both of questions 1a—'Have you used the service to post question(s)?'—and 1b—'Have you used the service to view other posts/answers?'). Respondents who had not used the service were routed to question 11 and were not shown question 7. Of the 101 respondents routed to question 7, 95 of these provided responses to these items.

Table 4: Baseline survey respondents' perceptions of potential benefits of using the E4F service

I will use the service because (I think) ... (Baseline Q7: %)	Strongly agree %	Agree %	Disagree %	Strongly disagree %	Don't know %	Item total (N)
...it will help me improve my teaching	17%	62%	1%	<1%	20%	463
...it will improve my school's approach to using research evidence	15%	54%	4%	1%	26%	463
...it will give me opportunities to discuss research evidence with others	13%	60%	7%	1%	20%	464

A series of single response questions.

Please note that non-responses are not counted or presented in the above table, and percentages refer to the proportion of those who responded to each of the items (total N is shown for each item). Due to rounding, percentages may not sum to 100.

A total of 464 respondents gave at least one response to these questions.

Source: NFER E4F baseline survey, September 2015.

Table 5: Follow-up respondents' perceived outcomes after using the E4F service

When I used the E4F service, I found ... (Follow up Q7: %)	Strongly agree %	Agree %	Disagree %	Strongly disagree %	Don't know %	Item total (N)
...it helped me improve my teaching	6%	41%	23%	3%	26%	95
...it improved my school's approach to using research evidence	17%	43%	16%	3%	21%	95
...it provided opportunities to discuss research evidence with others	16%	56%	13%	1%	15%	95

A series of single response questions.

Please note that non-responses are not counted or presented in the above table, and percentages refer to the proportion of those who responded to each of the items. (Total N is shown for each item.) Due to rounding, percentages may not sum to 100.

A total of 95 respondents gave at least one response to these questions.

Source: NFER E4F follow-up survey, summer term 2016.

Note that we also explored whether there had been any changes in anticipated benefits and perceived outcomes on these items among the 114 respondents who completed the survey at baseline and at follow-up. Of those who strongly agreed or agreed at baseline and responded at follow-up (N = 47), more than half still strongly agreed or agreed. However, one fifth of these disagreed at follow-up—there was a large minority (nearly 20%) who disagreed that their teaching had improved.

The baseline survey findings were reflected in the explanations that case-study interviewees gave for their school deciding to use the E4F service. For example, a primary school senior leader said that her school had aspirations to use more research to support teaching and learning and considered that the E4F service would make it easier for teachers to access research. A senior leader in a secondary school explained that his school became involved in E4F because the senior leadership team wanted 'wider evidence to inform decisions' and to 'back up decisions with evidence from outside the school' for example on Key Stage 4 setting and grouping by gender and ability. Staff in other schools stated

that they joined E4F with the expectation that it would signpost them to current research on the theories underlying different teaching approaches.

The school case-study evidence also corroborates the follow-up survey findings. For example, a senior leader in a primary school noted that because the E4F service put ‘research at your finger tips’ and provided another source of evidence that teachers could use, it supported the school in developing a learning community of staff. Similarly, another senior leader commented positively on the outcomes of using E4F:

If nothing else, it's raising teachers' eyes [...] and making us look at the bigger picture [...] that is a very positive outcome. It is helping staff realise that part of their role is to look beyond their classroom for wider educational knowledge base—that in itself is a good thing. It is enhancing the culture of research in the school (senior leader, primary school).

In addition, the school case studies provided further evidence of E4F stimulating a research evidence dialogue. For example, a senior manager in a secondary school said that the ‘useful information from experts’ had contributed to raising general awareness about the use of research evidence, adding that previously staff would not normally talk to colleagues about research evidence. The issue of a raised awareness of research was also noted by a school champion in a primary school, particularly that it had led to reading around the use of spelling lists and dictation which had stimulated a debate on using these devices in literacy education. Elsewhere, a secondary school’s teaching and learning group was planning to share and discuss the research evidence provided by E4F. The quotation below illustrates a service-user’s perspective on their experience of having a question answered through E4F:

I had a question answered by an academic from a university. She gave me a lot of information herself, her own answer to the question, and then directed me to other resources. She also invited me to get in touch if I had further questions. It was a good dialogue and I was happy with that. The answer reinforced my thinking but also made me think a bit deeper. My question was answered quite promptly (primary school teacher).

What are the perceived outcomes from using the service?

This section examines follow-up survey respondents’ perceptions of the outcomes of using the E4F service, including the difference they thought it had made to their practice, their pupils’ learning, and their schools’ policies and plans. The survey results are presented in Table 6.

As Table 6 shows, the majority of those responding to questions about the use of the E4F forum answered positively—that it had made at least some difference in the six areas in question. Just over three quarters (47 of the 61 respondents who answered the question) reported that the answers they had received had made at least a little difference to their ‘interest and enthusiasm for using research evidence’. Indeed, respondents were most positive about this aspect compared with the other outcome areas questioned: in this area, 14 of the 61 respondents (just over a fifth) said using E4F had made ‘a great deal of difference’.¹⁴ This survey finding was reflected in the case-study evidence we collected. For example, one school champion reported that using the service had encouraged some staff to read more research, and another that E4F had provided ‘a springboard’ to promote ideas about pedagogy to staff and had led to the setting-up of a teaching and learning newsletter to share teaching experience and expertise.

¹⁴ That said, a similar number (N=14) felt it had made ‘no difference at all’ to their interest in using research evidence.

Table 6: Follow-up survey respondents' perceptions of the difference receiving answers to questions posted to the E4F service had made¹⁵

Thinking about the answer(s) you have received, what difference, if any, has it/have they made to... (Follow up Q9: N only as less than 100)	No difference at all (N)	A little difference (N)	Some difference (N)	A great deal of difference (N)	Total (N)
... your interest/enthusiasm for using research evidence	14	18	15	14	61
... your awareness of new techniques/ approaches to apply in your teaching	9	25	22	5	61
... your understanding of new ideas, knowledge/-information	8	22	26	5	61
... your practice in the classroom	12	20	23	5	60
... your pupils' learning	13	19	23	5	60
... your school's policies and plans	16	20	22	3	61

A series of single response questions.

A filter question: all those who had received answers when using the service were routed to these 'outcome' questions on the endpoint survey.

Please note that non-responses are not counted or presented in above table, and numbers are the proportion of those who responded to each of the items. (Total N is shown for each item.)

A total of 61 respondents gave at least one response to these questions.

Source: NFER E4F follow-up survey, summer term 2016.

Respondents were positive about outcomes for their teaching. Similar proportions of respondents noted the difference made to their awareness of new techniques and approaches applicable to their teaching, and to their understanding of new ideas, knowledge and information (over four fifths of respondents, 52 and 53 out of 61 respectively). A majority of respondents (almost four fifths, 48 of 61) reported that there had been an impact on their practice in the classroom—although notably there were more respondents who felt that (as yet) there had been no difference at all in their classroom (compared with reports of new approaches and ideas).¹⁶

The survey also asked respondents if they could provide an example of how an E4F query response had made a difference to them, their teaching, their pupils, or the wider school. The two main differences identified by the 51 respondents who gave a relevant and codeable response were (1) increased awareness, knowledge, and understanding of ideas for teaching and lessons (17 respondents), and (2) improved resources and policies for using evidence (ten respondents). Other examples included: the wider impact in the school, departments, and all classrooms (eight

¹⁵ Note, where N is greater than 100, we present the percentage and N. Where N is less than 100, we present N only, with the exception of Tables 5 and 14 where N is 95 and we show percentages.

¹⁶ Note small 'N' when interpreting these results.

respondents); improved dialogue and dissemination of evidence and ideas between staff (six respondents); and improved classroom practice and teaching (five respondents).

Case-study interviewees also reported that expert feedback to their questions had increased their awareness of new and different learning approaches which had extended their repertoire of teaching techniques that they could use. Teachers told us that impacts on their teaching practice included enhanced understanding of how to:

- deliver flipped learning;¹⁷
- develop pupils' thinking capability (for example, metacognition);
- build fluency in mathematics without rote learning;
- use homework to best effect;
- utilise learning support;
- use strategies to address low-level disruptive behaviour; and
- use marking schemes in order to maximise pupil learning from teacher feedback.

As a wider, more embedded assessment of outcomes, we also asked respondents to consider any outcomes for pupils' learning, and for school policies and plans (see below). A majority of respondents (almost four fifths, 47 of 60) considered that the answers they received from the E4F service had made a difference to their pupils' learning: five respondents said 'a great deal of difference', 23 reported 'some difference' and 19 'a little difference'. The example below shows how the use of E4F made a difference in one primary school:

Vignette 1. The impacts of using E4F to improve behaviour in a primary school

Question asked: Are there any strategies to improve low level disruptive behaviour in year 2?

This question was answered via a short discussion and a series of links to published research papers. The staff member, (a senior leader), read the articles and reassessed and updated the school's use of various strategies to address low-level disruptive behaviour. The school acted on advice relating to changing elements of the school environment and redesigned classrooms to provide quiet spaces and different areas that pupils could use for individual or group work. The teacher also experimented with using different types of music in the classroom to promote a calm atmosphere which contributed to improvements in children's behaviour. In addition, pupils were asked to suggest ideas about how behaviour could be improved, and different approaches were tried out on a weekly basis, with the perceived results being discussed in class. Overall, this had a positive effect on the way children responded to the teacher and led to a decrease in disruptive behaviour.

As found for outcomes for classroom practice, a minority of respondents (just over one fifth, 13 of 60) said that receiving an answer through E4F had made no difference at all to their pupils' learning. This could be explained by the time lag between teachers adopting new teaching techniques and

¹⁷ 'Flipped learning' involves the use of digital technology to provide direct instruction on new concepts outside of the classroom. Pupils come to lessons already having a preliminary understanding of the topic, freeing up class time for the teacher to focus on other beneficial learning activities. Further details are provided in Straw, S., Quinlan, C., Harland, J. and Walker, M. (2015) 'Flipped Learning – Research Report', London: Nesta. Available at <https://www.nfer.ac.uk/publications/NESM01>

approaches and impact on pupils' learning. Case-study interviewees reported that, while using the evidence provided by E4F had increased their depth of understanding of how pupils learn and their awareness of teaching techniques, it was too early to identify impacts on pupils' learning.

Around three quarters of respondents (45 out of 61) indicated that the responses they had received from the E4F service had made a difference to their schools' policies and plans. Examples from two case-study schools are presented below.

Vignette 2. The impacts of using E4F to change school policies and plans

**Questions asked: How do we effectively set and update targets with primary children?
How can targets be shared with children and parents and updated effectively?**

Several senior leaders and teachers were involved in a working group looking at ways of refining the school's approach to sharing targets with parents and children. Two questions were posted on the E4F website which were answered via links to six pieces of published research. After consulting these sources, the staff members fed back to the group and a decision was taken to implement some changes.

E4F has had a whole-school impact. From the research and ideas that were provided we collated all the things that we'd got in the working party and came up with a process based on information we'd got from E4F. We put some procedures in place for sharing targets with pupils and parents across the whole school (senior leader, primary school).

Vignette 3. The impact of using E4F to change a secondary school's approach to homework

Question asked: Flipped Learning is, after all, a shift in learning, a change in structure, so how can this approach aid progress?

Prior to using E4F, the school had started to reconsider its approach to homework. A school-based working group of five people submitted questions about flipped learning and received responses from an academic. Users of the E4F service from other schools also posted comments. After considering the responses, which the school felt helped to contextualise and reinforce an approach they were already considering, the school decided to implement changes and adopted a flipped learning approach.

We were thinking of changing anyway, but as a result of E4F, we have changed our approach to what was traditionally called homework. We re-addressed our home learning approach and now use a flipped learning approach which is a whole school policy, all because of E4F (senior manager, secondary school).

A minority of respondents (just over a quarter, 16 out of 61) reported that the answers had made no difference at all to their schools' policies and plans for using research evidence. According to interview data, a lack of time to act on a response, or a delay in receiving one, were the key reasons given for inaction. However, this lack of evident grass-roots change may simply reflect the fact schools need time to assess whether a particular intervention such as E4F is likely to be beneficial before subsequently revising and updating policies and plans. As one interviewee said:

The evidence will be taken into consideration when making decisions about pupil groupings for Year 9 going into Year 10. It will be about six months before he can say what impact the evidence has had on decision-making (senior leader, secondary school).

Indeed, according to case-study interviews, such evaluation and decision-making often took place in the summer term, ahead of a new academic year—and any such decision-making had not yet happened, or had not yet been shared with all staff. Some case-study schools had plans to share the research evidence they had received via E4F in forthcoming staff training events. In addition, school

readiness to engage with and use research evidence in decision-making may be a factor in respondents' ratings about school-wide benefits. While the E4F pilot schools were generally motivated to engage with research evidence, there would be variations in individuals' motivations and some individuals within those schools were perhaps less enthusiastic. As one senior leader in a secondary school noted: while their school had become more inclined to use research evidence compared to the previous year, 'there is more work to be done in putting this out there'. The senior leader suggested that s/he could guide and encourage staff to ask questions to get evidence for decision making, but noted that 'they still might need help in acting on it'.

In summary, respondents were positive about the difference the E4F answers had made to them, particularly in terms of their interest in using research evidence, their awareness of new approaches, and understanding of new ideas. Although still positive, outcomes relating to application to the classroom, to pupils' learning, and to wider school policies were reported to a lesser extent.

What are the impacts from using the service?

This section presents the findings from the impact measures included in the surveys. We explored two of the measures from the 'Research Use' tool (Poet *et al.*, unpublished) at baseline and follow-up. The results are displayed in Table 7.

Table 7: Measure 3, 'Perception that academic research is not useful to teaching', and Measure 4, 'Perception that own school does not encourage use of academic research'

Factor	Cronbach's alpha in baseline survey ¹⁸	Baseline survey Mean, N (SD)	Reliability of the measure at baseline	Cronbach's alpha in the follow up survey	Follow-up survey Mean, N (SD)	Reliability of the measure at follow up
Measure 3: Perception that academic research is not useful to teaching	0.56	Mean 4.26 N = 515 (SD 1.4)	Moderate	0.46	Mean 4.40 N = 171 (SD 1.4)	Low
Measure 4: Perception that own school does not encourage use of academic research	0.55	Mean 4.82 N = 515 (SD 1.5)	Moderate	0.42	Mean 4.69 N = 171 (SD 1.6)	Low

Source: NFER E4F baseline and follow-up surveys, September 2015 and summer term 2016.

The mean score for Measure 3 was higher for the follow-up respondents than it was for the baseline respondents. This indicates that the baseline respondents were more optimistic about the value of academic research; in contrast, the follow-up respondents felt more strongly that academic research is not useful to teaching.¹⁹ It is unclear why this may be, given the positive testimonials from teachers

¹⁸ The reliability of each measure was explored using Cronbach's alpha which indicates the extent to which the items are measuring the same underlying latent construct (or composite measure). Cronbach's alpha determines the average correlation of items to gauge reliability of the measure.

¹⁹ Measure 3 and Measure 4 are negatively worded. The scoring scales have not been switched, and hence an increase in mean indicates a more negative response; a decrease in a mean indicates a less negative/more positive response

in interviews about engaging with the research evidence they had been provided with. It could be that the follow-up respondents were reflecting on a more informed view of using research—perhaps acknowledging some of the time and effort implications of engaging with research, highlighted as challenges elsewhere in this report. It may also be that teachers discerned a difference between ‘academic’ research (for example, published in an academic journal), and research evidence that they found applicable in the classroom (as provided in a number of cases through E4F). Durbin and Nelson (2014) suggest that research is more likely to inform practice in the classroom if educational research commissioners consider school-level needs and interests, and if teachers receive training in how to interpret research findings.²⁰ In contrast, the mean score for Measure 4 was lower for follow-up respondents, indicating that at follow up, teachers were more positive about their school encouraging the use of academic research. This may reflect some initial culture changes in these schools towards engaging with research, for example as part of teachers’ continuing professional development (CPD), or built into schools’ policies and plans for the year.

It is worth noting that the reliability of these factor measures was similar at baseline to those found in the original ‘Research Use’ survey (where Measures 3 and 4 were categorised as moderately reliable, with Cronbach’s alpha of 0.57 and 0.59 respectively). However, at follow up in our survey, both measures appeared less reliable when compared to baseline, and when compared to the original Research Use survey. This may be related to the smaller N at follow-up. In addition, as both these measures include only two items, there is more chance for measurement error to occur. Appendix H provides the item-level statistics for these two factor measures at baseline and at follow-up.²¹

We also explored whether there had been any change in the mean scores for Measures 3 and 4 based on the 114 respondents who took part in the survey at baseline and follow-up (that is, the matched sample). There was no evidence of a statistically significant change in these measures over time.

²⁰ The Research Use survey (Poet *et al.*, unpublished) deliberately uses the term ‘academic research’, to distinguish it from, for example, teacher enquiry. For example, Q13 states: ‘This question aims to find out how (if at all) you use research information in your work. By ‘research’ we mean information from books, reports, articles, summaries, training or events that is based on academic studies’.

²¹ The individual items making up Measure 3 were: ‘I do not believe that using information from research will help to improve pupil outcomes’, and ‘Information from research conducted elsewhere is of limited value to our school’. The items making up Measure 4 were: ‘My school leaders/governors do not encourage me to use information from research to improve my practice’, and ‘Other staff in my school rarely use information from research to inform their teaching practice’. These items were options within Q13 and hence respondents would have been asked to think about academic research evidence.

Feasibility

This section explores participants' perceptions of the feasibility and attractiveness of the E4F service in terms of interest in and demand for the service, extent and nature of usage, the brokerage and evidence provision aspects of the service, participants' satisfaction, and intentions to continue to use the service. We draw on responses to the baseline and follow-up surveys, school interview data, and perceptions from academics and service providers.

Levels of awareness, interest, and demand for the service

This section discusses the demand for and interest in an evidence brokerage service, and the motivations among schools who piloted the E4F service.

Demand for E4F

Across all our sources of evidence, we identified a demand for a service such as E4F. A panel of 1,430 practising teachers from 1,201 schools in the maintained sector in England completed the NFER Teacher Voice Omnibus survey in June 2015: the responses indicated a wider demand for the service. Half of all respondents from this wider sample expressed an interest in using the service (50% were very or quite interested—the proportions were the same for both primary and secondary school respondents here). Senior leaders were generally more enthusiastic about potentially using such a service than classroom teachers (63% of senior leaders were very or quite interested, compared to 45% of classroom teachers). The majority of respondents in this survey predicted that they would use the service on a termly or half-termly basis (63%), with very few anticipating weekly usage (3%).²²

Staff in pilot and developer schools were surveyed prior to using the service to gauge levels of awareness and interest. Not surprisingly, not many were actually aware of the E4F service prior to completing the survey (as the service had not yet been launched in their schools, and the survey was deliberately designed as a baseline ahead of the launch); 85% were not aware of the service. However, the majority felt they would be interested in using it (37% were quite interested, and 21% were very interested—they could read a short piece of information about the service on the survey). These figures show that demand for such a service among participating schools and the wider population was reasonably high. It is interesting to note that in the pilot, in terms of numbers, more classroom-level teachers than senior leaders used the service.

Motivations for involvement with E4F

The main reasons that schools got involved with the E4F service included the opportunity to connect teachers with sources of research evidence and to develop existing approaches to CPD in schools. Senior managers in particular were attracted to the E4F service because they felt it would enhance their teachers' access to evidence to support independent research activities and improve teaching. In some cases, E4F was seen as a unique way of formalising the systems that were already being developed to support schools and their staff to become more research-engaged. In other schools, E4F was seen as a way of enhancing CPD programmes and performance management arrangements for staff, whereby use of the service became part of an individual's CPD plan and in

²² A technical report on the responses provided by the June 2015 NFER Teacher Voice panel has been supplied to the EEF. This report is an internal document provided for the client only. Data tables cannot be reproduced without explicit permission from NFER and the EEF.

some cases part of formal performance management objectives. School champions were interested in E4F as a means to encourage everyday research engagement, as one champion explained:

Teachers need to understand that researching is part and parcel of our job—we need to have easy access to research to be able to improve our practice on a daily basis. E4F allows that to happen. E4F helps us to tailor it to specific issues in our school (school champion, secondary school).

Individual teachers were attracted to the service as they felt it would provide access to evidence to help inform, generate and confirm their ideas relating to classroom practice professional interests.

The research academics interviewed were generally attracted to the E4F service because of the potential opportunity it gave them to disseminate their work. Several noted that, being enthusiastic about their work, they welcomed E4F as a platform to share their knowledge with teachers and contribute to improved educational practices and outcomes for children:

I love the idea of E4F as it gave me the opportunity to have quite a big impact with only a very little input. Most of my research is really applied and I'm really passionate about having an impact. It's important to make sure our research findings make it out to teachers and practitioners (research academic).

I got involved because why wouldn't you? There is a huge problem with the gap between the people producing and reporting evidence that could be useful for policy and practice and the users of that evidence. There needs to be some kind of conduit (research academic).

The process of introducing E4F in schools

Across our case studies, school champions and senior leaders generally introduced E4F to their staff at scheduled whole school meetings (e.g. in small primary schools), at senior/middle leader meetings and then cascaded (for example, where the school champion was a research lead in a school), or at department level meetings (for example, in the department that the school champion worked in, in larger secondary schools). Initial meetings often involved demonstrations of the service and also provided opportunities for teachers to login to the service collectively and address any technical/logistical difficulties. Some school champions followed up with updates and reminders about the service in school email alerts and newsletters.

Levels and nature of usage of the service

Usage of E4F

We explored the level of usage of E4F through monitoring data and survey data. We first present the MI data: this recorded level of usage in terms of the number of people posting questions and the number of questions posted (it did not record number of logins, or views). Findings on the timing of posts are included in the section 'Timing and method of posting questions'.

MI data on level of usage

According to MI usage data collated from September 2015 to the end of July 2016, a total of 192 individuals posted 249 questions on the E4F website. Of these, 158 posted one question each; a further 34 individuals posted more than one question each (i.e. they posted multiple times). Table 8 shows that most pilots posted one question only (82%); 10% posted two questions; and 8% posted three or more questions. Interestingly, 11 of the 34 individuals who posted multiple questions were school champions (in other words, school champions—of which there were 32—were more likely than others to post multiple times).

Table 8: MI data on the number of questions posted on E4F

MI data record of usage	(N)	%
Number of individuals posting one question only	158	82%
Number of individuals posting two questions	19	10%
Number of individuals posting three questions	9	5%
Number of individuals posting four questions	4	2%
Number of individuals posting five questions	2	1%
Total N of individuals posting questions	192	100%

Due to rounding, percentages may not sum to 100.

Source: E4F MI data, July 2016.

While the MI data captured information about posted questions, our survey asked about other means of using the E4F site, including viewing questions and answers. As can be seen from Table 9 below, over half (59%, N = 101) of our 171 follow-up survey respondents had used the E4F service to post or view questions.

Table 9: Survey data on the number of respondents using the service

Have you used the service in the following ways ... (Follow up Q1, N, %)	(N)	%
Respondents who posted a question only	17	10%
Respondents who viewed the website only	24	14%
Respondents who did both (post and view)	60	35%
Respondents who did not use the service in these ways	70	41%
Total N	171	100%

Due to rounding, percentages may not sum to 100.

A filter question: all those who answered [Endpoint=1].

A total of 171 respondents could have answered this question.

Source: NFER E4F follow-up survey, summer term 2016.

Seventy-seven out of the 171 follow-up respondents (just under half the follow-up survey sample) had posted a question, of which over one third (N = 60) had also used the service to view the questions posted by others. About one-seventh of respondents (N = 24 of the 171 respondents) had viewed the site but had not posted a question themselves.

Comparing the survey respondents with those known to be using the service (according to MI data), we can see that there was a slightly greater proportion of multiple questioners amongst the survey respondents. Moreover, there was a large number of users (according to MI data) who did not respond to the follow-up survey. When interpreting the results of the follow-up survey, this may mean we have a partial view of participants' experiences of the pilot. Questions were posted by a wide range of school staff—from NQTs to senior managers. The majority of follow-up survey respondents who had posted a question had just asked a single question (53 individuals out of 171), although nearly a fifth (13 respondents) had posted two questions. Six respondents had posted three or more questions since the launch of the service.

Types of questions posted

A wide range of questions was posted by staff using E4F. Teachers posted questions relating to their own CPD priorities, to approaches and strategies to meet the needs of particular pupil cohorts, and to wider school priorities and policies. A flexible approach to asking on any topic was described by one senior leader:

We channelled our energies into what we need to focus on as a school, but teachers also have the freedom to ask questions to suit their interests or improve their practice (school champion).

MI data on question topics: keywords

Teachers assigned keywords to the questions they submitted to the site. E4F personnel on occasion amended the keywords assigned. Table 10 below shows the most common topics about which questions were asked, according to the keywords within the E4F MI system. In future iterations of the service, it may be helpful for the E4F team to edit teachers' assigned keywords more systematically to reflect those used in the EEF toolkit, for comparability.

Table 10: Most common keywords teachers assigned to their questions (rank order)

Nature/topic of question (keywords in the E4F system)	N
Engagement/motivation	53
Raising attainment	35
Differentiation	27
Literacy	22
Learning styles ²³	20
Assessment for Learning	19
Mathematics	17
Gifted and talented	15
Behaviour	14
Digital technology	13
Feedback ²⁴	13
Reading	13
Assessment without levels	12
Homework	12
Mindset	12
Science	12
Creative planning	11
Parental engagement	11
Boys ²⁵	10

Source: E4F MI data, July 2016.

The topics covered by the pilot users (according to the MI data) reflected the topics suggested by the wider sample of teachers in NFER's Teacher Voice Survey. However, this wider survey also

²³ This category was used by teachers in conjunction with other keywords. None of the questions posted were about visual auditory kinaesthetic styles of learning, as per the EEF toolkit interpretation of learning styles.

²⁴ The system also contains a separate category on marking, where six questions were categorised. Four of the marking questions were coded as 'Feedback and Marking', indicating some overlap between these two categories.

²⁵ There is a further category on gender, where eight questions were recorded. There is also a category on girls, where four questions were recorded.

highlighted that teachers and school leaders would be interested in evidence on effective CPD (22%) and leadership skills (18%)—topic areas that weren't frequently covered by those in the pilot. Further investigation of demand for evidence on these topics may be needed in any future roll out of the service.

As a separate exercise, the EEF undertook an exploration of the questions asked to see how they aligned with the EEF toolkit strands and themes, and whether other topics seemed current. They found that E4F teachers' and senior leaders' questions most commonly related to the following toolkit themes: developing independent thinking, literacy, pupil engagement and behaviour, character education, and feedback and monitoring pupil progress. The toolkit themes of research evidence on school organisation and staff development were not frequently sought after. Other common topics perhaps not fully captured by the E4F internal keyword system included: use of technology (a wider category than the digital technology keyword in the system), gender (although boys and girls were categories within the keyword system), and mixed ability. Some specific question areas, each asked about on a small number of occasions (10 or less), included: SEN, high attainers, revision, memory, PE, early years, flipped learning, collaborative or group work, and 'life after levels'. Although only a small number of questions were asked about these areas, they perhaps indicate where there is, or will be, burgeoning interest in research evidence.

The common and emerging areas of evidence-based interest are important to understanding demand and ensuring supply of relevant evidence expertise. As expressed in the DfE White Paper, 'Education Excellence Everywhere' (2016), being able to 'set up a bank of research questions updated annually, will focus funders of research and academics on generating evidence in areas which directly inform classroom teaching' (p. 39). The E4F service could help to inform such a bank of questions.

In most of the case-study schools, a wide range of questions had been posted, generally orientated around specific teaching and learning issues. One secondary school senior leader noted that, although questions were 'very subject specific' they were also 'all very much pinpointed towards how can we use that evidence or strategy in the classroom'. Furthermore, several teachers commented that 'the best' questions were those with practical implications rather than those that were more theoretical. This reflects follow-up survey findings reported earlier, where a substantial minority of respondents said using E4F had not enthused them about using academic research. One teacher suggested that staff need to collectively consider why they are asking the question and, in at least one school, review meetings have been planned to assess the types of questions teachers should be asking in order to maximise E4F's potential benefit to the school.

Some concerns were raised by research academics about the nature of questions posted, with one suggesting that teachers required more guidance in ensuring that questions were focused on research evidence rather than general teaching advice. (Perspectives on the role of the E4F broker, part of which was to help formulate questions that could be asked of academic researchers, are discussed in the section on Feasibility: 'The effective features of the service'.)

Some examples of the actual questions posted on the E4F website are presented in Table 11.

Table 11: Examples of questions posted on the E4F website

Examples of questions posted on the E4F website
<ul style="list-style-type: none"> Is there any evidence into successful strategies for differentiation?
<ul style="list-style-type: none"> What research is there into the use of e-textbooks vs using printed textbooks in secondary schools? What benefits does each method bring to the learning of students? What drawbacks does each method bring to the learning of students?
<ul style="list-style-type: none"> How to get the less able students to feel confident and take part in group/class discussion. (Especially Somalian girls)
<ul style="list-style-type: none"> The aspirational grades idea came from original research by Rosental and Jacobson which looked at the effect of labelling some children as 'spurters' and found it changed teacher perceptions and behaviours and children achieved better as a result. Is there any research on negative impacts on aspirational target grades on students or teachers?
<ul style="list-style-type: none"> Is there any evidence to support the idea that being able to read music is correlated with later academic success? Should all Key Stage 3 students be taught to read music?
<ul style="list-style-type: none"> How could Dialogic Literary Gatherings accelerate progress, particularly with disadvantaged pupils and create community cohesion between pupils? Could this strategy also be a successful way of engaging parents in the school's ethos?

Source: E4F MI data, July 2016.

Timing and method of posting questions

There was some variation in the way that E4F was used across the case-study schools. In several schools groups of teachers simultaneously posted questions during INSET or other training and development days. This structured approach, cognisant of time-pressures on teachers, was seen to be particularly effective in engaging teachers to use the service for both their own research interests and school priorities. One primary school teacher commented:

Because we have the time, because we've already thought about what we want to ask, it's easier to engage. It's a structured way of doing it which makes it more effective.

In other schools, a more informal and flexible approach to the service meant that individual staff members posted questions on a more ad hoc basis to suit their ongoing research needs and availability. One senior leader commented:

Every teacher has made use of the service. They use it on a 'when needed' basis. Most staff will have tied it in to when they get their release time to work on their Performance Management. So usage is at variable times throughout the year (school champion).

MI and interview data suggest that, following an initial surge in interest and usage, the numbers of people posting questions diminished over time. Of those who posted multiple times, the majority posted either on the same day or at least within the same month—suggesting that they were engaging with the service at one main time point. In the case of school champions, it could be that they were posting questions on behalf of a number of staff. However, individual staff members also posted multiple questions at single time points. That said, some individuals posted throughout the year, for example a school champion posted five separate questions on 11 October 2015, 2 December 2015, 12 January 2016, 26 January 2016, and 7 June 2016.

MI data on when questions were posted

One hundred and seventy-five questions were posted in the first term of the pilot (September–December 2015); 55 during the spring term (January–March 2016); and 19 in the summer term (April–July 2016).

Some schools had been proactive in maintaining the profile and presence of E4F in the school—especially when its use was formalised in scheduled CPD sessions. The use of the E4F newsletter and updates was seen as a particularly effective way of reminding staff about the service. Among those we interviewed, teacher workload and competing demands for time were the key reasons cited for staff not having used the service more regularly. (Wider barriers, including those for individuals who did not use the service or who were not interested in using it, are discussed in the section on ‘Challenges and barriers’.) Here it is worth noting that the application of an intervention such as E4F will benefit not only from being guided and framed by a theory of change but also by an understanding of best practice in knowledge production and transformation, and knowledge engagement and use as outlined in Nelson and O’Beirne (2014).

The effective features of the service

E4F was designed to have unique features intended to link teachers to evidence and academic experts in order to improve their practice. These features included (1) a brokerage function, and (2) various sources of, and routes to, research evidence, including teachers being put in touch with an academic expert. Service users’ perspectives on the usefulness of these elements are presented below.

The E4F brokerage function

The brokerage function was a key element of E4F. This was initially seen as the bridge between users and the service, with the broker helping teachers to develop and refine their questions prior to routing them to relevant research or to a relevant research academic.

During the development phase of E4F, it became apparent in workshops that teachers and school leaders would prefer to engage with the broker via email and the web rather than by telephone. Similarly, NFER’s Teacher Voice Panel of respondents indicated a preference for engaging with such a service via email and web-based formats rather than through verbal communication.

When we asked baseline survey respondents, although they felt that speaking to a broker or emailing a broker might be helpful (61%, N = 279, and 58%, N = 267—out of the 457 respondents who answered this question) they felt that being able to search an online database or have links to research evidence for themselves to explore would be even more useful (79%, N = 361, and 86%, N = 393 respectively). These results suggest that the brokerage element itself (spoken or email) was not anticipated as being as useful as support from experts (82%, N = 375) and other schools (80%, N = 362), or indeed seeking out evidence themselves (searching an online database and links, as above). This reflects other feedback on the service itself, which suggests that the brokerage element was not as fully understood as it might have been.

In the follow-up survey, only around a third of respondents (36%, 27 of 75 responding to this question) noted having had any communication with the E4F broker. There was a marginal preference for emailing the broker from within the E4F website (7 out of 25 teachers who did this found this useful) rather than speaking to the broker (4 out of 26 teachers who did this found this useful). That said, respondents were more positive about having their question answered by a research expert (42 out of 60), and by being provided with links to research evidence (also 42 out of 60). Again, this suggests

that the brokerage role itself was not fully understood or recognised as part of the questioning process. This perhaps reflects the way the service was delivered in the pilot—very much as a web interface. We discuss the challenge of encouraging greater dialogue and verbal interaction in the section on ‘Challenges’ and in the ‘Conclusions’ section.

Although in case studies, some school staff were positive about the broker’s role and contribution to the service—‘E4F is the middle person in finding what you want—they know what you’re looking for, they know the keywords’ (primary school teacher)—it was apparent that some individual questioners did not have much direct contact with, or support from, an E4F broker. In some cases this was related to limited recognition of the brokerage role, for example several case-study interviewees highlighted low levels of awareness of the broker’s presence: ‘To be honest, I wasn’t aware that that was something you could do’, said one teacher. Other users revealed some confusion about the broker’s role, including the misconception that the broker was the research academic answering their question. Other interviewees suggested that they did not need to communicate with the broker as senior staff within the school fulfilled elements of that role by assisting staff to construct their research questions in the most appropriate and effective way to generate a suitable answer. As one consultee commented:

Staff had already had training and conversations with the headteacher about how to effectively frame and phrase questions. We spent time making sure the questions were specific enough so that we really could get the answers we wanted. So, there was not much dialogue with broker. Most people had questions answered without conversations with a broker. (senior leader, secondary school).

From the brokers’ perspective, the level of contact and support given in response to a question was very much dictated by the question: some demanded more than others. Brokers also noted that for well-framed questions on well-researched topics, the brokerage function was felt to be straightforward and therefore perhaps not that visible to the questioner. Where questions were less clear, or where there was a more limited evidence-base or supply of academic expertise, the brokerage function was more important in terms of supporting the questioner and facilitating a response. However, the brokers sometimes found it challenging to encourage dialogue between themselves and teachers in order to clarify the nature of the questions. This is perhaps related to the finding that teachers themselves preferred to email and were somewhat remote (according to survey responses), giving the perception that they did not have time for dialogue or interaction (according to interview data).

Some research academics noted difficulties in answering questions which they thought were not adequately constructed. As one commented: ‘Sometimes the questions strike me as being a bit simplistic and I find it quite difficult to give an answer that would make sense to a teacher but also had research credibility’. Accordingly, research academics supported the potential value of the E4F broker in terms of question development and also valued the broker’s role in effectively routing questions accurately to match their individual areas of expertise: ‘The questions that I got were absolutely fine and I was confident that I could answer those’. Research academics felt that by tailoring evidence-responses to the needs of the individual teacher, the E4F service provided more than an internet search would—it provided added value. As one academic reported:

While Google might give teachers access to the journals, that doesn’t make them accessible in terms of the way they are written. That’s what E4F can add. E4F can tailor the research to the teacher (research academic).

One academic suggested that the brokerage function limited or precluded contributions from researchers who had not been assigned to a specific question but who could have valuable insights and evidence to suggest to the questioner:

I think it is a good thing there is a broker but there are lots of things I saw where I thought I could input something from my expertise. But, I think sometimes the brokers may not necessarily see the link (research academic).

The scale and scope of the service requires the brokers to have up to date, detailed knowledge of the research academics' areas of expertise in order to answer any question that is important to a school.

Evidence sources

Teachers posting questions on the E4F website could receive answers in a variety of ways. Being supplied with links to research evidence and having their question answered by a research expert were identified as being the most useful ways (by nearly three quarters of follow-up respondents—71% and 70% respectively of the 60 teachers who responded to these questions). Other avenues that baseline teachers felt might be useful were having questions answered by staff in other schools, or searching an online database (80% and 79% of baseline respondents, and 56% and 57% of follow-up respondents respectively felt these might be useful). At the pilot stage, the E4F service itself offered a function to search for previously asked questions, research resources, or researchers and schools. Questions or answers could also be commented on by staff in other schools. However, the E4F remit was not to provide a full online database of all possible research resources. The MI data shows how each question was answered through a variety of ways.

MI data on how the questions were answered—the service 'outcome'

Within the E4F system, administrators could record the service 'outcome' for each question posted as part of internal management processes. Table 12 below shows that the majority of questions were answered and closed on the E4F site. Some were still being processed at the time of the MI data download.

Table 12: Service 'outcome'

Service 'outcome'	No. of questions (N)	%
Closed—question answered	110	44%
Closed—linked to an existing answer	54	22%
Responded to by the IEE	36	14%
Assigned to a research academic, awaiting response	15	6%
In process of being assigned	15	6%
Other	18	7%
Total N	249	100%

Source: E4F MI data, July 2016.

Question answered via links to evidence

Prior to using the service, 87% of respondents (393 of 457 responding to this question) thought it would be useful to have their question answered with links to research evidence. In the follow-up survey, 71% of teachers rated this approach useful (43 individuals). Some teachers valued the straightforward presentation of information through links to published evidence, as one commented:

I found the links quite useful—I don't think it would have been any better if somebody had called me or sent me an email. I liked the fact that I'd asked something and somebody had sent me a series of links (senior leader, primary school).

Other teachers valued this way of having their question answered because they believed it added rigour to the answers they were given, rather than just receiving unsubstantiated opinions from an academic. This was a perspective shared by at least one research academic: 'I'm pleased that you can put up resources and published papers, not just provide opinions as answers'.

Question answered by a research expert

Prior to using the service, 82% of respondents predicted that it would be useful to have their question answered by a research expert. At follow-up, 71% of respondents rated this approach useful (43 individuals).

Teachers valued research experts' contributions in terms of tailoring research to meet their specific inquiry, as well as filtering out less relevant evidence. This was perceived to be a key element of E4F's 'added value' over internet search platforms. Several case-study interviewees suggested that the research experts were of good calibre, from well-known and respected institutions, which gave them confidence in the reliability and quality of the evidence and answers provided. One academic also suggested that the presence of 'some big names on the site, some important people up there, is very good from teachers' point of view'. Staff from one school were pleased that the same academic answered all the questions posed by staff members from a particular cluster, which provided consistency and helped foster further discussion between staff and also with the academic. One user noted that they had benefited from 'a professional discussion which made me question things and think things through more' (school champion). Brokers reported how they tried to consistently remind teachers about the intended role of dialogue, for example at workshop events and through regular emails. They also made the dialogue/comment 'button' on the E4F website more prominent. However, one research expert suggested that their potential contribution (and that of E4F as a whole) had not been fully capitalised upon, demonstrated by the relatively low level of communication and ongoing dialogue with teachers: 'That was my big disappointment. It felt like my answers were just going into an empty space'. This particular academic reflected that the 'static' way in which the answer was posted may have deterred the teacher from responding further. Furthermore, several of the academic researchers interviewed expressed surprise and some disappointment that they had not been asked more questions since signing up to E4F, suggesting that they would like to have had a greater level of involvement.

Service-level interviews suggested that in some schools there had been a number of repeated exchanges and follow-up website-based conversations between teachers and researchers. In addition, E4F brokers reported that E4F events revealed that off-site dialogue was taking place between schools and academic experts, and within schools.

Overall satisfaction with the service

Service users were asked to rate their overall experience of using E4F in terms of satisfaction with the approach and satisfaction with the answers, on a scale of 0 to 10, where 0 was the lowest and 10 was the highest. As Table 13 below shows, service users were generally satisfied with the way E4F operated with around half of the survey respondents to this question (51) positively rating their experience as seven or more out of ten. Around one third (32) expressed medium levels of satisfaction (four to six out of ten), whilst ten users (about a tenth of those answering this question) rated the service as three or less. Table 14 summarises this data into high, medium and low levels of satisfaction, and shows the mean and standard deviation.

Similarly, users were generally satisfied with the nature and quality of the answers they received, although there was a level of concern about the time taken between posting a question and receiving an answer (this is discussed more in the 'Challenges' section). Nearly two-thirds of respondents (53) answering this question rated the answers they received as seven or more out of ten, with a further 23

users expressing medium levels of satisfaction (four to six out of ten). Eight users (less than a tenth of those who responded to this question) rated the answers as three or less.

Table 13: Overall satisfaction with E4F (N)

Overall, to what extent are you satisfied with the following aspects of the service...	0	1	2	3	4	5	6	7	8	9	10	Total
	N	N	N	N	N	N	N	N	N	N	N	(N)
Overall satisfaction with the way the E4F brokerage service operates	2	0	4	4	7	15	10	9	22	10	10	(93)
Overall satisfaction with the answers provided through the E4F service -	1	1	2	4	5	9	9	14	20	9	10	(84)

A series of single-response questions.

A total of 171 respondents could have answered these questions.

Source: NFER E4F follow-up survey, summer term 2016.

Table 14: High, medium, and low levels of engagement

Overall, to what extent are you satisfied with the following aspects of the service...	Low	Medium	High	Total	Min	Max	Mean	SD
	N	N	N	N	Rating	Rating		
Overall satisfaction with the way the E4F brokerage service operates	10	32	51	93	0	10	6.6	2.4
Overall satisfaction with the answers provided through the E4F service	8	23	53	84	0	10	6.8	2.3

A series of single-response questions.

A total of 171 respondents could have answered these questions.

Source: NFER E4F follow-up survey, summer term 2016.

Ninety-five respondents in the follow-up survey also identified the reasons for their overall satisfaction with the E4F service, as highlighted in Table 15 below. Most agreed that E4F was straightforward to use, the E4F website was easy to access, and E4F was an effective use of time.

Table15: Participants' evaluation of the E4F service

When I used the E4F service I found ... (Follow up Q7)	Strongly agree %	Agree %	Disagree %	Strongly disagree %	Don't know / Not applicable %	Total %	N
... it straightforward to use	26%	66%	4%	0%	3%	100	95
... it to be an effective use of my time	11%	56%	18%	4%	12%	100	95
... it to be backed by academic research	23%	55%	9%	0%	13%	100	95
... the answers provided were useful	14%	53%	15%	1%	18%	100	95
... the answers provided were of high quality	16%	52%	14%	1%	18%	100	95
... the answers provided a balanced view	11%	48%	14%	0%	27%	100	95
... the answers were provided quickly enough for me	14%	38%	25%	6%	17%	100	95
... the website was easy to use	21%	69%	4%	0%	5%	100	95

A series of single-response questions.

Due to rounding, percentages may not sum to 100.

A total of 95 respondents gave at least one response to these questions.

Source: NFER follow-up survey, summer 2016.

E4F was straightforward to use

Nine-tenths (92%, N = 88) of the follow-up survey respondents agreed or strongly agreed that the E4F service was straightforward to use (26% and 66% respectively) with a similar proportion noting that the website was easy to use. Interviewees confirmed this, commenting favourably on the accessibility of the E4F website: 'I was a bit sceptical at the beginning. I thought it would be a bit unwieldy but it has won me over—the technical side has been so smooth' (senior leader secondary school). One senior leader valued the ability to quickly and effectively log on to the site to see what questions teaching staff were posting. Note that any user could view any other users' post once published and answered. In addition, school champions could view questions in progress from staff within their own school. This enabled them to gain an overview of the issues that staff were interested in in order to inform and support the school's CPD programme.

E4F was an effective use of time

Just under two thirds of respondents thought that E4F was an effective use of their time (56% agreed and 11% strongly agreed) although around a fifth (18%) disagreed, and 4% strongly disagreed with this statement. Teachers liked the idea that E4F would save them time in accessing research evidence 'without having to go and hunt it down' for themselves. As one teacher commented: 'It saved me time as it pinpointed me where to go to get the answer I wanted. It was more effective [than looking myself]' (primary school teacher). Users saw the service as a 'less onerous' way of finding answers to their questions as they did not have to commit much time to it—generally about an hour, often within designated scheduled CPD sessions:

I think that it is a really useful research tool. I think it will save a lot of time and will be a lot more efficient if it gets properly up and running. You could spend a lot of time researching or preparing something when there might be something already out there (senior leader secondary school).

The research academics were generally satisfied with their involvement although several would have welcomed a greater volume of questions and, as mentioned previously, expressed disappointment about the lack of ongoing or further dialogue with teachers after posting an answer.

E4F was backed by academic research

Nearly four fifths of survey respondents valued E4F because it was backed by academic evidence, (55% agreed, and 23% strongly agreed with this statement) and only 9% disagreed. A further 12% did not know.

Time taken to receive an answer

There was less satisfaction about the length of time taken to receive an answer to a posted question. Just over half of the respondents agreed that the answers were provided quickly enough (38% agreed and 14% strongly agreed with this statement), however a third disagreed or strongly disagreed (6% and 25% respectively). MI data provides more information on the time taken to 'close' an enquiry. Further discussion on the volume of questions and time taken to provide answers is presented in the 'Challenges' section.

MI data on time taken to answer (i.e. close a question)

According to the MI data, the time taken to answer questions ranged from 0 to 292 days (169 questions had 'time taken' recorded, the remaining 80 did not have a record—some of these were still in train and not yet published and closed). Sixty-one questions were answered within two weeks and, of these, 43 were answered within a week. A further three questions were answered between 15 and 21 days (within three weeks). So while just over one-third of the 169 questions were answered within three weeks (64 questions) the remaining two-thirds (105) took 22 days or more to be answered. Indeed, 48 questions took over 81 days to be answered and closed.

Intentions to continue using E4F in the future

Users of E4F were asked if they intended to use the service again in the future. Overall, there was a positive response with just under half of survey respondents indicating that they were either very or quite interested in using E4F again (22% and 22% respectively). A notable minority (20%) stated that they were not interested in using the service again, with the majority of these being secondary school staff. This is similar to the proportion of respondents who were less satisfied with their experience of using the service overall (as reported in Table 13). The section below, 'Challenges and barriers', explores possible reasons. Staff in case-study schools were enthusiastic about continuing their involvement with the service, as were the research academics. In addition, brokers intended to continue to offer the pilot schools access to the E4F website in order to use the resources and embed research evidence into their school development plans.

Challenges and barriers

The research found similarities in the perceived challenges before using the E4F service and the reported barriers by respondents after using it. Finding time to use the service was the main perceived and actual barrier and challenge for teachers.

The baseline survey asked respondents whether they expected to experience any challenges in using the E4F service. Time to use the service was the most frequently identified challenge (half, 126 of 253 responses to this open question referred to this). The next most frequently identified challenge, noted by 43 baseline responders, was deciding how best to use, prioritise, and implement the service in their school. Other anticipated challenges were the relevance and quality of the service (22 responses), a low level of understanding of the service (15), the technical accessibility of the service (15), and service capacity—for example, the timeframe to respond and the capacity to deal with the volume of questions—ten responses.

The end-point survey asked respondents what, if any, were the key challenges and difficulties they had experienced in using the E4F service. The largest response to this open question was the time available to use the service (24 of 97 responses). This finding was reflected by the case-study interviewees, where one school champion noted that using the service ‘can get lost in the workload’ of busy teachers.

Another challenge was the relatively low level of understanding, awareness, and promotion of the service (20 responses). This challenge was acknowledged by the school champions we interviewed. For example, one school champion explained that effective engagement relied on senior leaders enthusing teachers to be proactive and use the service. Another school champion emphasised that ‘it needs consistent driving forward, a champion to remind staff about it. Left alone, it trickles’. She said that she encouraged teachers to keep implementation alive by including it in departmental meetings and teaching and learning events.

Twenty respondents identified the relevance, quality, and quantity of answers as another challenge in using the E4F service. This reveals that the type of answers received affects respondents’ views on how usable the service is. Allied to this is the time taken to receive a reply to a posted question which 20 respondents identified as a difficulty.

Case-study interviewees were more satisfied with the content of the answers they received than the speed of reply, which they thought should be improved to encourage teachers’ take up and continuing use of the service, as highlighted in the following quotes:²⁶

The speed and timing of the response was a little bit too slow in some cases. That’s the only thing that needs work on. Some members of staff became disengaged and a bit demotivated with the service because they were waiting for answers, or to start the dialogue (senior manager, secondary school).

If staff are engaged in this because they have a certain amount of time to do the research, if they don’t get the answer in a timely manner, their opportunity to do anything with the answer has passed (teacher, primary school).

²⁶ We present quantitative MI data on the time taken to receive an answer in the section above.

I would, however, have liked suggestions about where to go and look for other information/some articles. Something to help spur me on a little bit more to add a little bit more of an academic slant to it (senior manager, secondary school).

Also it would have been good if they had provided links to other schools or universities already doing work on, or researching in, that area (senior manager, secondary school).

Interestingly, 13 of 97 respondents reported that a challenge to using E4F was the perception that the service was not relevant and that there was no need for it. This response could be explained in two main ways: first, respondents considering that they have enough research evidence to draw on without using the service, and second, respondents considering that the service was not worth using because it did not provide relevant information and evidence.

The staff we interviewed in the case-study schools were more positive, saying that they would use the E4F service again and would recommend it to others because: 'it's a time-saving device in order to have worthwhile evidence for decision making', 'it has the potential to put research at your finger tips', 'it provides access to cutting-edge research', and 'it gives you an expert to talk to'. One senior leader said that her school was unlikely to use the service in the future as her colleagues had access to enough research 'for what we need at the moment'.

In addition, there were challenges cited on the brokerage and supply side of the service. In terms of brokerage, the core E4F team noted that some of the questions posted needed to be re-pitched to suit an evidence-based response, and for some, there was no relevant evidence available. Matching questions to experts was sometimes challenging—particularly in the areas of PE and special educational needs. Obtaining responses from academics sometimes took time, and on occasions required several reminders from the brokers. There was no formal arrangement with academics, and the core E4F team felt that in future they would develop a service-level agreement with research groups and research centres stipulating, for example, response times and perhaps paying them a small amount to answer questions.

In addition, demand was felt by the core E4F team to be at the upper end of what they had expected. While this is a positive finding in terms of there being an appetite for evidence-informed practice, to scale up, there would need to be further brokerage support for the service. The E4F team feel this could be managed through a hub model—with the current lead school as the overarching lead, and with other schools also managing brokerage. In addition, further researchers would need to be recruited to support the service.

Readiness for trial

Our research findings suggest that the E4F service model as currently conceived and delivered is not ready to be evaluated in a randomised controlled trial. There are several reasons for this which we explain below.

Some of the challenges identified in the E4F development and pilot stage need further consideration and action. These include an inconsistent speed of response in answering questions posted by schools, a limited awareness and understanding of the E4F brokerage role among service users, and re-exploring the notion of greater dialogue between teachers and research experts which might help to ensure higher levels of teacher engagement with research, evidence, and knowledge. However, E4F has made good progress in establishing the service in a relatively short period of time. We suggest that the pilot would benefit from another year of operation in order to consolidate progress to date, continue to maintain momentum in service delivery and usage, further engage and feed back to academics, address the challenges, and build a secure platform for continued development and possible scaling up. We believe that these developments would help to strengthen E4F and extend its

reach into schools' culture, strategic improvement plans, CPD provision, and classroom practice where evidence is used by teachers on the frontline.

We do not think that E4F is amenable to a randomised controlled trial (RCT). The main reasons for this are:

- E4F is dynamic—it is an interactive delivery model which is responsive to usage flows. This means that the service has to be flexible and versatile to meet the changing volume and range of users' requirements. Its appeal is that schools can use the service in ways and at times that are convenient and relevant to senior leaders' and teachers' topics of interest, priorities, needs, decision-making timetable, and workload. In these respects, the E4F service does not readily align with one or several pupil outcome measures.
- Similarly, E4F contains a number of elements of delivery that are not (yet) manualised—in particular, research experts' roles, and the precise role of the broker. While further guidance documents could be developed, the premise of E4F, built on dialogue and social interaction, may mean too many natural variations in 'delivery' to include in a randomised controlled trial (RCT). While 'social' variations could be captured on a log or scale, such a metric may not be readily amenable for an RCT.
- Within the timescale of the pilot, interviewees did not present to us quantitative evidence of changes in pupil outcomes, although some survey respondents felt that there were some positive changes for children in their classrooms as a result of the new strategies they were trying. Pupil outcomes may occur once such a service is embedded. However, as pupil learning outcomes may be spread across various subject areas, it may be more useful to continue to use the Research Use tool as an outcome measure for an evaluation of E4F.
- E4F is cross-phase, covering both primary and secondary schools, which would make it difficult to ascertain a common outcome measure at pupil level. E4F also covers a range of subject and topic areas, again, making it difficult to ascertain a common learning outcome measure—such as attainment in English or mathematics, which are usually central to the EEF's trials.
- Finding and deciding on an appropriate unit of analysis is key to undertaking a randomised controlled trial or any further evaluation. In the case of further evaluating E4F, changes in individual teacher outcomes using the Research Use survey would provide valuable teacher-level outcome data. In addition, school-level aggregates would help measure 'reach' (the rate and scope of participation) and how this relates to perceived outcomes.

In summary, we believe that E4F is not suitable for trial because it is an intervention that needs to be flexible and responsive in the way it operates; and it would be difficult to define measure of pupil-level impact to capture the effect of the intervention across a range of phases and subject areas.

It should be noted that, in the theory of change, we identified that E4F should make a difference in terms of creating a high demand for using the service, fostering appreciation of its benefits and usefulness, and achieving changes to schools' and teachers' engagement with, and use of, research evidence. We conclude that although E4F is not amenable to a trial there are signs that it is starting to make a difference to research engagement in the pilot schools.

Costs

Our estimate of the total cost of the intervention includes the up-front costs of the development phase and the costs associated with delivering the pilot itself.

Up-front costs

The main costs of the development phase of E4F (April–August 2015) included the salary costs of the service’s management personnel and the construction of the website. There were also costs associated with three workshops attended by representatives from 12 developer schools and the E4F core team, to help design and shape the service. The costs of the development phase are presented in Table 16.

Table 16: Up-front costs—development phase

Item	Time (hours)	Time (days, 1 day = 5hrs)	Cost (£)
Costs for website			16,500
Materials			935
Admin	487.50	97.50	4,680
Leadership	487.50	97.50	17,794
Academic developer	107.25	21.45	3,875
Academic co-ordinator	487.50	97.50	8,108
Researcher	195.00	39.00	5,159
Consultant			1,750
Travel			1,564
Events			2,436
Sub-total for up-front costs			62,801

Source: E4F costs data, September 2016.

Pilot phase costs

During the pilot’s operation, September 2015–July 2016, staff salaries for the ongoing leadership and operation of the service were the highest costs which had increased substantially from the pilot phase. For the pilot phase, staff time included time taken to recruit academics to the service (to identify and contact them). The cost of the website was lower in the pilot phase (see Table 17) than in the development phase, while the costs of hosting and attending two workshops had also increased due to the increase in the number of schools attending (12 developer and 20 pilot schools).

Table 17: Cost of providing the intervention—pilot phase

Item	Time (hours)	Time (days, 1 day =5hrs)	Cost (£)
Costs for website			3,868
Materials			3,738
Admin	975	195	9,360
Leadership	975	195	35,587
Academic developer	214	42.9	7,750
Academic co-ordinator	975	195	16,215
Researcher	390	78	8,468
Consultant			1,364
Travel			5,885
Events			2,436
Sub-total for cost of providing the intervention			94,671

Source: E4F costs data, September 2016.

Views on costs from service users and academics

In interviews, opinions were divided about the cost structure of the service. Several senior leaders suggested that their schools would not be willing to pay to use the service while others suggested a small annual subscription (in the region of £100) would be acceptable. Several of the academics were adamant that researchers should not receive payment for their contribution, as the academic community had a 'moral imperative' to disseminate their work and help practitioners have an impact on children, provided that their input remained manageable (less than a couple of hours a week). None of the academics thought that the time commitment had been too onerous and, in one case, a team of academics from one institution shared the responsibility and time commitment by jointly monitoring the E4F website to check for potential questions and responding through a scheduled rota approach.

Conclusion

Key conclusions

1. Demand was at the upper end of expectations: 192 users from the 32 schools (around 9% of teachers) posted a question over the year of the pilot. Sixty percent of teachers who responded to the survey indicated that they used the service to ask a question or to read the responses.
2. The majority of users who responded to the survey had a positive experience of using the E4F service. They were satisfied with the quality of the answers provided and found the E4F website easy to use. The most common topics that users had evidence-based queries on included: pupil engagement and behaviour, developing independent thinking, differentiation, literacy, and feedback and monitoring pupil progress.
3. Users considered that there were benefits to using the E4F service, particularly in terms of providing opportunities for research discussion; increasing their interest and enthusiasm for research evidence; improving their schools' use of research evidence; and (although to a slightly lesser extent) helping to improve their practice in the classroom and pupils' learning.
4. The pilot identified a number of potential improvements needed to the service, including faster responses for teachers, better promotion of the brokerage role, and facilitation of greater direct dialogue between the teachers and researchers
5. Although there are signs that E4F is starting to make a difference to research engagement, it is not be suitable for a randomised controlled trial (RCT) measuring impact on pupil outcomes. The service is responsive to the questions teachers ask, which this pilot found to cover a wide range of subject areas, making pupil outcomes a challenge to measure using administrative data.

Formative findings

Findings from this evaluation suggest that the key learning points to consider for further developing the E4F service are:

- Improve the speed of response to the questions posted by schools to ensure that teachers receive research evidence within a timescale appropriate for application. This will help to maintain the interest and momentum of service users. Several teachers suggested a turnaround time of around two to three weeks would be an acceptable and useful timeframe.
- Provide email updates to inform teachers about progress in providing an answer to the question(s) they have posted and when they are likely to receive a reply. This will convey to teachers that their questions are important, reassure them that they are worthy of a response, and that their enquiry is being processed.
- Increase awareness of the brokerage role and enhance communication between teachers and the broker so that teachers receive suitable advice and support in developing and refining their questions. This will help to ensure that teachers receive useful responses to well-designed questions.
- Encourage dialogue between teachers and research experts in order to develop teachers as active rather than passive users of research evidence. This will help E4F to further engender a networked learning community where teachers and experts gain benefits from an interactive working relationship which adds value to the supply of research evidence and its practical application.
- Consider developing greater focus on supporting research experts, by investing similar efforts in engaging them in the service as has been applied to teachers in the pilot year. For

example, through inviting them to workshops and impact events or through having a more formal service-level agreement. This could enhance their input and investment in the service.

- Re-align the keywords with the EEF toolkit themes and strands, and other current topics relevant to policy developments. Ensure a pool of research academics on the most popular themes (for example, independent thinking, literacy, pupil engagement and behaviour, character education, feedback and monitoring pupil progress). Recruit research academics on other topics of interest—such as use of technology, gender, mixed ability—and monitor areas of potential burgeoning interest such as flipped learning and ‘life after levels’.

Interpretation

This evaluation of the E4F service had some limitations. These were:

- The evaluation was a study of the feasibility of the E4F service rather than a comprehensive and summative assessment of the service’s outcomes and effectiveness. Consequently, the findings presented in this report should be interpreted within this context and appropriate caveats applied.
- The evaluation was a study of the early development of E4F when the foundations and infrastructure of the service were being set in place and working relationships between broker, teachers and experts were being developed. During this period, teachers, experts and the broker were steadily getting used to how the service worked and understanding what it could offer. This meant that the evaluation captured an early picture of a pilot service rather than a fully formed service.
- The quantitative data provided by this evaluation are descriptive statistics based on two time-points. The evaluation was not set up as a comparative study of the use of research evidence by teachers in schools using E4F and a comparison group of schools not using this service. Thus, while the statistical analysis that this report draws on presents a useful assessment of change over time, it does not provide a more robust evaluation of impact.
- The schools involved were not a general sample of schools. While a range of schools took part, in terms of phase, geography, and levels of pupil disadvantage, the main criteria for involvement in the pilot was a school’s enthusiasm to pilot the service. Indeed, in some cases, this was down to the enthusiasm of a key member of staff—the school champion. Such contextual factors (that is, keen schools) may have influenced service outcomes in this pilot. Further evaluation with a wider sample of schools may be valuable.

The E4F evaluation aimed to establish whether the service showed evidence of promise, whether the service was feasible, and whether it was ready to be evaluated in a trial.

An analysis of the survey data and case-study findings indicated that the E4F service was a promising intervention because it was encouraging teachers to engage more with seeking and using research evidence to support teaching and learning in their schools. Although in some cases it was too early for this to have triggered changes in classroom or school practice, there were signs that senior leaders and teachers were discussing the possibilities of using evidence, applying it, and incorporating it into school processes. Here, the role of the school champion was influential because, as senior leaders, which most of them were, they led the introduction of E4F in their schools and persevered in maintaining the profile of the service and promoting impetus to use it. However, owing to their workload, school champions did not always have the time to drive E4F at school level as much as they would have wished.

The evaluation found that the development phase was instrumental in framing and formulating the implementation of E4F. This phase was important because it was consultative and invited developer schools to make an active contribution to shaping the service. There was a good level of participation by school representatives at three awareness-raising events in the development phase. They valued the fact that their role was not prescribed and that they could initiate ideas. The schools worked well together and senior leaders' and teachers' suggestions were incorporated into the design of the service which, through their contribution, evolved from a telephone-based to a web-based communication model. The website was a notable success: it was created in time for the E4F launch day and was a pivotal feature of the service. The evaluation ascertained that establishing and running E4F at this scale was feasible, though there were challenges in recruiting experts who collectively had a range of appropriate expertise, matching teachers' questions to experts' areas of expertise, and securing answers to questions. While it was reasonably easy to recruit schools to the pilot, sustaining teachers' use of the service given their busy work schedules was a challenge. Further work on supporting research experts in their role within E4F, in order to engender their further investment, should be considered. In addition, demand was at the top end of what was expected, and hence if any further scale-up is considered, additional brokers and academics would need to be recruited. A hub model could be considered—whereby additional lead schools provide brokerage support to groups of schools.

E4F has made good progress in establishing the service in a relatively short period of time—and indeed being able to set up and run the service within one and a half years was seen by those in the core team as a key achievement. Our evaluation concludes that E4F is not ready for trial, and indeed, may not be suitable for trial because of the flexible and responsive operating model; and the challenge in defining a measure of pupil-level impact to capture the effect of the intervention across a range of phases and subject areas. We suggest that the pilot would benefit from another year of operation where it can consolidate progress to date, continue to maintain momentum in service delivery and usage, address the challenges identified in our formative findings above, and build a secure platform for continued development and possible scaling up. We believe that these developments would help to strengthen E4F and extend its reach into schools' culture, strategic improvement plans, CPD provision, and classroom practice where evidence is used by teachers on the frontline.

Future research

Our findings suggest that it would be useful to consider the future shape of E4F. This could include exploring new approaches such as developing working arrangements with research centres and groups that would provide an expanded cadre of experts to increase the supply and speed of answers to users. This would help to streamline delivery and minimise risks in terms of not providing users with timely responses.

We also think it would be beneficial for E4F to put in place a mechanism for gaining regular feedback from pilot schools on the quality of service provided, the extent to which it meets their changing needs, and how it might be improved.

In addition, it would be worth considering if, and how, the E4F service can be integrated within other existing research engagement structures—whether these be within school (such as school CPD processes), or within the wider system (such as initial teacher training), or aligned with other similar services. Finally, it is worth noting that this feasibility study focused on evaluating participants' views on the service, with outcome measurement as a secondary focus. In any further evaluation, it would be worth focusing on outcome measurement in more depth, both quantitatively (for example, by using a pre- and post- matched sample) and qualitatively (in particular to explore outcomes and impact in more depth).

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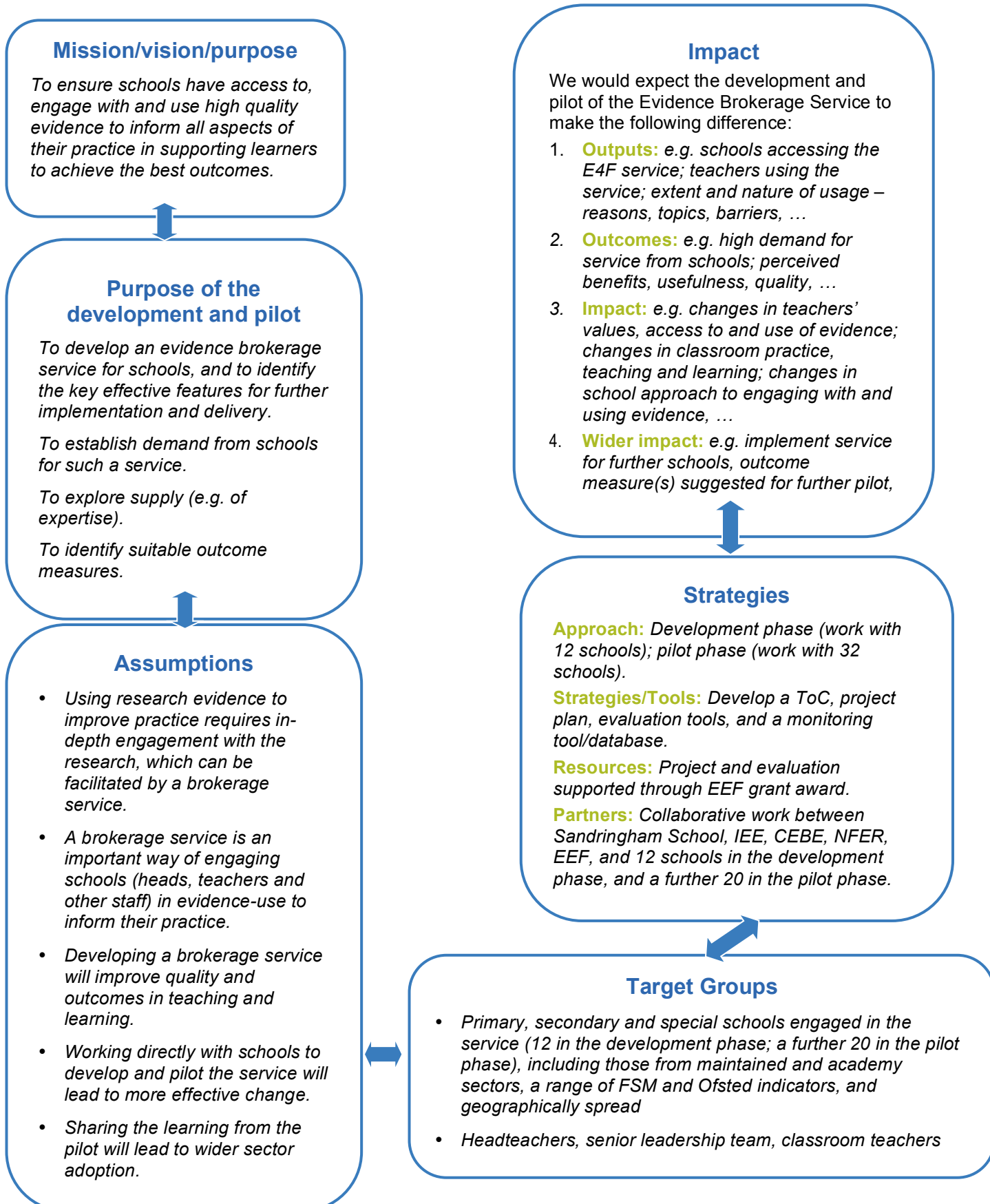
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Appendix A: Theory of Change for E4F



Appendix B: Information Sheets and letters

Information Sheet



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Evaluation of Evidence for the Frontline

Information sheet for Developer and Pilot schools

What is the project about?

Evidence for the Frontline (E4F) is a brokerage service being developed to support schools to engage with and use research evidence more effectively. The brokerage service will signpost teachers and school leaders to relevant evidence on what works in supporting young people's learning. The service is being developed by Sandringham School and the Institute for Effective Education at the University of York, with support from the Coalition for Evidence Based Education (CEBE).

Who is conducting the evaluation?

The Education Endowment Foundation (EEF) is funding the development and evaluation of the service. The National Foundation for Educational Research (NFER) is undertaking the independent formative evaluation.

What are the evaluation aims?

The evaluation aims are to explore: the best design for such a service, demand for such a service, the supply of academic expertise and suitable outcome measures for any future trial. We will interview and survey school staff, academics and the delivery team to: understand how the service is being used, identify potential improvements, and make recommendations about how to evaluate its impact in a larger trial.

What will the research involve?

The evaluation will involve: developing a theory of change, devising a monitoring tool, workshops, interviews and surveys with 11 Developer and a further 20 Pilot schools, interviews with academics, and NFER's Teacher Voice Survey.

As a Developer school, how will I be involved?

Representatives from Developer schools will attend workshops to shape and design the service. NFER researchers will attend a workshop to gather your views on the service to date. Developer schools will continue into the Pilot phase.

As a Pilot school, how will my school be involved?

Pilot schools will be able to use the E4F service from September 2015. We will ask a range of staff from all Pilot phase schools to complete a baseline and follow-up survey. We will also interview representatives from seven Pilot phase schools to discuss the effectiveness and perceived impact of the service. If your school hasn't used the service, we may call you to find out about any barriers or challenges.

When will I need to get involved?

Date	Activity
April-August 2015 Developer schools	Workshops. Three Developer workshops to support the design of the service. Discussions with NFER at Workshop 2
Early September 2015 Developer and Pilot schools	Baseline survey for all Developer and Pilot schools (for the school lead contact, a member of SLT, and up to two teachers)
September 2015- Jan 2016 Developer and Pilot schools	Workshops to launch and enhance the use of the service. NFER observations at the September launch workshop
March – May 2016 Developer and Pilot schools	Telephone interviews with seven schools from across the Developer and Pilot phase (up to three representatives per school) to produce 'school profiles' and vignettes
June 2016 Developer and Pilot schools	Follow-up online staff survey for all Developer and Pilot schools (for all baseline respondents and service users)

How will schools benefit from taking part?

Schools involved in the development phase of the project will have an active role in shaping the brokerage service. Pilot phase participants will benefit from access to a trained broker and being directed to evidence, resources, other school practitioners and/or an expert researcher in the field. If rolled out, schools accessing the service will be better placed to make evidence-based decisions to support learners in their school.

Do schools have to take part?

Schools agreeing to take part in the Development and Pilot phases will be expected to contribute to the evaluation to ensure that the service is developed in a way that meets schools' needs and that its impact can be properly investigated. The evaluation is designed to minimise demands on your school. We are working with Sandringham School to ensure we do not ask you for duplicate information. Your support for the evaluation is appreciated.

How will NFER use and protect the data collected?

All data gathered will only be used for the purposes of this evaluation. It will be treated in strict confidence and survey data will be anonymised in line with the Data Protection Act 1998. The data collected from the questionnaires will be passed onto EEF and the Fischer Family Trust (the organisation that manages EEF's data archive) individually anonymised. It will be stored on the EEF data archive and UK Data Archive for research purposes. No individual staff members will be identifiable in any report arising from this evaluation.

We are planning to include a small number of vignettes in the report which will be signed off by the schools prior to any publication. If these schools agree, they will be named in the interests of information sharing.

How will the findings be used?

The findings from the project will be freely available on the EEF's website. They will be used to inform the education sector about the brokerage service.

Who can I contact for more information?

Pippa Lord, the Project Leader at NFER, is very happy to answer any questions you might have. Please contact her on 01904 567633 p.lord@nfer.ac.uk

Invitation letter to developer schools

20th March 2015

Dear Developer School

I would like to formally welcome you as a developer school to *Evidence for the Frontline*. This is an 18 month project working with the Institute for Effective Education at the University of York to develop a service to connect teachers and researchers, funded by the Education Endowment Foundation. As a developer school, you will be instrumental in shaping this service in a way that makes it effective and sustainable in supporting teachers and schools to make more informed decisions. In this letter I outline the commitment and practical arrangements that will be involved as a developer school.

In terms of commitment, developer schools will each nominate a member of staff, usually a teacher or member of the leadership team, who will commit to attending 5 development and pilot days over the course of the next 18 months. Specifically, the development days during which we will develop the service as a team this academic year are:

Thursday April 23rd
 Thursday June 4th
 Thursday July 2nd

From September, a group of pilot schools will join the team, and all schools involved will be able to pilot the service that has been developed. The days during the 2015-16 academic year that schools will attend are:

Thursday September 24th
 Thursday January 14th

Each of the development days will take place at:

Sandringham School
 The Ridgeway
 St Albans
 Hertfordshire
 AL4 9NX

The duration of the development days will be between 10am and 3pm. Sandringham School is located approximately 2 miles from St Albans City train station which is serviced regularly by fast trains from London. The school is also close to the M25 and the A1(M). During these days, all refreshments and materials will be provided.

As a developer school, you will be asked to participate in the project evaluation being carried out by the NFER, involving surveys and interviews. Please note that no payments will be made to either academic or school-based participants, as the long term success of scheme depends entirely on the process being of sufficient value to participants that it becomes self-supporting. However funding is available for travel costs for developer schools.





Regarding communications, in addition to myself, I would like to take this opportunity to introduce key people involved in this project:

Vicki Kateley

Evidence for the Frontline administrator
Alban TSA administrator
vicki.kateley@sandringham.herts.sch.uk

Jonathan Haslam

Evidence for the Frontline researcher lead
Manager of Dissemination, IEE, University of York
jonathan.haslam@vork.ac.uk

In order to confirm your place as a developer school, please email our *Evidence for the Frontline* administrator Vicki Kateley (address above) by Friday March 27th with the following information:

- Confirmation of attendance for the forthcoming development days
- Confirmation of your school's project leads. At present we have the following members of staff nominated:

School Lead	
School role	
Email	
Member of the school's leadership team in support of the project	
Role	
Email	

Thanks in advance for your interest and participation in this project. I look forward to meeting you or your school lead on April 23rd.

Yours sincerely

Caroline Creaby
Project Manager, *Evidence for the Frontline*
Assistant Headteacher, Sandringham School



Invitation letter to pilot schools



20th May 2015

Dear Research Lead

Information for prospective Pilot Schools

I would like to introduce you to *Evidence for the Frontline*. This is an 18 month project working with the Institute for Effective Education at the University of York to develop a service to connect teachers and researchers, funded by the Education Endowment Foundation. You have the opportunity to become a pilot school, where you and your school will have access to this service throughout the next academic year. In this letter I outline more detail about the project and the commitment involved as a pilot school.

The aim of the *Evidence for the Frontline* service is to develop and test ways of enhancing educational practice by linking practitioners with researchers. The service will support teachers to access existing research resources, have questions answered by experts, be put in touch with researchers and make contact with schools who has faced a similar issue on a previous occasion. More information about the project can be found on the Education Endowment Foundation's website here: <https://educationendowmentfoundation.org.uk/projects/evidence-for-the-frontline/>

The project is in its early stages already with 12 'developer' schools shaping the design of the service. From September, you have the opportunity be one of a group of 20 pilot schools who, along with the developer schools, will use and pilot the service.

In terms of commitment, pilot schools will each nominate a member of staff, usually a teacher or member of the leadership team, who will commit to attending 2 pilot days over the course of 2015-16. Specifically, the development days that schools will attend are:

Thursday September 24th
Thursday January 14th

Each of the development days will take place at:

Sandringham School
The Ridgeway
St Albans
Hertfordshire
AL4 9NX

The duration of the development days will be between 10am and 3pm. Sandringham School is located approximately 2 miles from St Albans City train station which is serviced regularly by fast trains from London. The school is also close to the M25 and the A1(M). During these days, all refreshments and materials will be provided.

As a pilot school, you will be asked to participate in the project evaluation being carried out by the NFER, involving surveys and interviews. Please note that no payments will be made to either academic or school-based participants, as the long term success of scheme depends entirely on the process being of sufficient value to participants that it becomes self-supporting. However funding is available for travel costs for pilot schools.





Regarding communications, in addition to myself, I would like to take this opportunity to introduce key people involved in this project:

Vicki Kateley
Evidence for the Frontline administrator
 Alban TSA administrator
vicki.kateley@sandringham.herts.sch.uk

Jonathan Haslam
Evidence for the Frontline researcher lead
 Manager of Dissemination, IEE, University of York
jonathan.haslam@york.ac.uk

In order to express your interest in being a pilot school, please email our *Evidence for the Frontline* administrator Vicki Kateley (address above) by Friday June 12th with the following information:

- Confirmation that a school lead can attend both pilot days
- Confirmation of your school lead and contact information as required in the table below.

School	
School Lead	
School role	
Email	
Member of the school's leadership team in support of the project	
Role	
Email	

In order to fulfill the Education Endowment Foundation's criteria, we need to ensure we have a mix of schools within the group of 20 pilot schools. Therefore, we will be in touch shortly after June 12th to confirm which schools have secured a place.

Thanks in advance for your expression of interest and I welcome any questions you have.

Yours sincerely

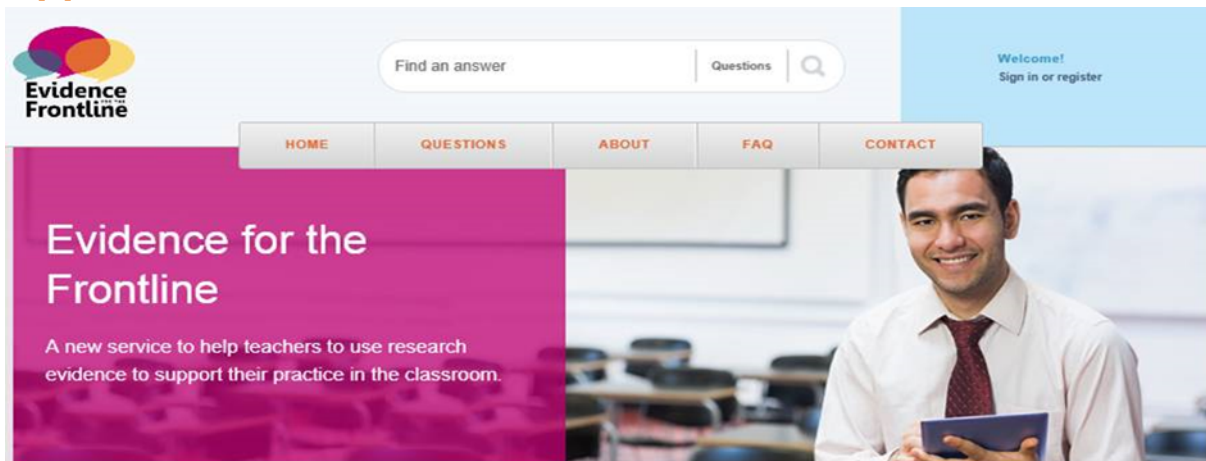
Caroline Creaby
 Project Manager, *Evidence for the Frontline*
 Assistant Headteacher, Sandringham School



Appendix C: E4F research academics

First name	Last name	Institution
Pooja	Agarwal	Washington University in St Louis
Sonia	Blandford	UCL Institute of Education
Caroline	Bond	University of Manchester
Bette	Chambers	University of York
Alison	Clark-Wilson	UCL Institute of Education
Lucy	Cooke	Great Ormond Street Hospital and UCL
Carol	Davenport	Northumbria University
Victoria	Devonshire	University of Portsmouth
Justin	Dillon	University of Bristol
Ann	Dowker	University of Oxford
Martin	Fautley	Birmingham City University
Becky	Francis	UCL Institute of Education
Stephen	Gorard	Durham University
Suzanne	Graham	University of Reading
Karen	Guldborg	University of Birmingham
Gillian	Hampden-Thompson	University of Sussex
Alice	Hansen	UCL Institute of Education
Linda	Hargreaves	University of Cambridge
Steve	Higgins	Durham University
Sherria	Hoskins	University of Portsmouth
Stuart	Kime	evidencebased.education
Simon	Kumar	York St John University
Sandra	Mathers	University of Oxford
Neil	Mercer	University of Cambridge
Sarah	Miller	Queen's University Belfast
Victoria	Murphy	University of Oxford
Debra	Myhill	University of Exeter
Stephanie	Pitts	University of Sheffield
Vivienne	Porritt	UCL Institute of Education
Jonathan	Rix	Open University
Peter	Rudd	University of York
Iram	Siraj	UCL Institute of Education
Robert	Slavin	Johns Hopkins University
Peter	Tymms	Durham University
Frances	Warren	University of Portsmouth
Rob	Webster	UCL Institute of Education
Michael	Wigelsworth	University of Manchester

Appendix D: The E4F website



About Evidence for the Frontline

Teachers submit questions and are matched with evidence resources, given advice by a university researcher, or put in touch with another school with relevant experience to help them to answer that question. The Evidence for the Frontline service is currently available to more than 30 schools in England involved in a trial of the project.



[FIND OUT MORE](#)

Latest questions

<p>Does speaking aloud aid recall? To what extent does speaking aloud aid recall?</p>	<p>Age: 11–18 Metacognition, Mathematics, Mindset, Talk for learning, Active learning, Learning strategies, Modern foreign languages (MFL), revision strategies, Memory,</p>
<p>Getting everyone on board What strategies encourage engagement of all students in mixed ability settings?</p>	<p>Age: 11–17 Behaviour, Engagement/motivation,</p>
<p>Breadth or depth? Is there research in to what is more valuable or beneficial to a GCSE student, a few 'select' GCSE or a breadth or different subjects? I'm considering which would foster a love of learning and further learning? Which would be more beneficial in terms of future employment? ...</p>	<p>Age: 14–16 Learning styles , Well-being,</p>
<p>Flipped learning How do you effectively set up a flipped classroom for a KS4 science class?</p>	<p>Age: 11–18 Digital technology, Science, Flipped learning,</p>
<p>Pupil premium students at University What percentage of pupil premium year 13 students that get offered places on university courses do not go on to complete these courses? How does this compare to the same percentage for non pupil premium students?</p>	<p>Age: 17–21 Aspiration interventions, Pupil premium, Transition, Poverty, Character,</p>

USER LOGIN

REMEMBER ME
[FORGOTTEN PASSWORD](#)

REGISTER

School

Appendix E: School Agreement



Evidence for
Excellence in
Education

National Foundation for
Educational Research

The Mere, Upton Park
Slough, Berks SL1 2DQ

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enquiries@nfer.ac.uk

www.nfer.ac.uk

Evaluation of Evidence for the Frontline (E4F)

Agreement to participate in the evaluation of E4F

Please sign and return your agreement to participate by 17th July 2015 to Sagina Khan, s.khan@nfer.ac.uk, Project Coordinator; or post to Sagina Khan at National Foundation for Educational Research, The Mere, Upton Park, Slough SL1 2DQ.

School name: _____

Research Lead name: _____

Please see attached Participant Information Sheet for details about the evaluation, and how data will be used and stored.

Agreement

I [Research Lead] agree to participate in the above evaluation, as detailed in the Information Sheet for Developer and Pilot Schools. I understand that:

- my [Research Lead] contact details will be passed from the E4F team to NFER for the purposes of this evaluation only
- I [Research Lead] will be the key contact throughout the project for the E4F and NFER teams (I will let the E4F and NFER teams know if these arrangements change)
- I will encourage a wide range of staff, and as many as possible (depending on school size), to complete the online surveys (five as a minimum at baseline, and these staff plus those who have used the service at follow-up)
- I will circulate NFER's online baseline survey instructions to staff in early September 2015
- NFER will collect survey respondent names and contact details in the baseline survey solely for the purposes of inviting staff to complete the follow-up survey and to conduct matched analyses; note, no individual survey responses will be shared by NFER with the E4F team, and no individual survey respondents will be identified in reports
- if invited, and if possible, my school will take part in telephone interviews to help create vignettes of practice to inform further implementation and trial (March–May 2016); schools contributing to vignettes outlining practice may be named in the interest of information sharing, with their prior agreement
- by using the E4F service, individual-level and aggregate school-level data will be passed from the E4F team to NFER in the form of Monitoring Information; data will be transferred securely

ON BEHALF OF THE SCHOOL:

HEAD TEACHER [NAME]: _____

NOMINATED RESEARCH LEAD [NAME]: _____

NOMINATED RESEARCH LEAD [SIGNED]: _____

DATE: _____

Appendix F: Data sources

Data source	What it covers
Theory of Change	Original theory of change developed at protocol stage with the developers
Teacher Voice output	To assess wider demand. We asked: <ul style="list-style-type: none"> • How interested are you in using this service? • How frequently do you think you might use it? • What topics would you be likely to ask a question on? • In which of the following ways would you like to use it?
Survey output including factor analyses	Interest, extent of usage, nature of usage, experience of using/evaluating the service, challenges/barriers, perceived outcomes from using the service, research use outcomes, and two outcome factor measures
MI data summary	Extent of usage including by who, topics, use of broker, time taken to answer, service outcome
Case-study interviews, low-user interviews, research academic interviews, service provider/developer interviews	a) context: rationale, motivations b) experience of using: extent, topics, brokerage usage, receipt of answer, challenges c) perceived outcomes: changes in awareness, knowledge/skills, teaching, learning, wider school d) time/costs e) recommendations/future
Development phase workshop and pilot phase workshop notes	Formative findings and key learning to date
Costs data	Supplied by E4F core team, and explored in interviews.
Follow-up telephone interviews with service providers	What has gone well? What has not gone so well? Why? Costs? Plans for the service – changes, scalability etc.?

Appendix G: Questionnaires

Questionnaire

Evidence for the Frontline (E4F) brokerage service

Thank you very much for taking part in this survey. Your responses will contribute to a study being conducted by the National Foundation for Educational Research (NFER) on behalf of the Education Endowment Foundation (EEF). It is exploring the Evidence for the Frontline (E4F) brokerage service being developed to signpost teachers and school leaders to research evidence and research experts.

The survey includes questions on your use of research information, and your thoughts on if and how you hope to use the service.

The survey should take no more than fifteen minutes to complete.

A follow-up survey will be sent to you in the summer term 2016.

All data gathered will only be used for the purposes of this evaluation. It will be treated in strict confidence and survey data will be anonymised in line with the Data Protection Act 1998. The data collected from the questionnaires will be passed onto EEF and the Fischer Family Trust (the organisation that manages EEF's data archive) individually anonymised. It will be stored on the EEF data archive and UK Data Archive for research purposes. No individual staff members will be identified in any report arising from this evaluation.

If you have any queries about the completion of this survey, or would like further information about the evaluation exercise, please do not hesitate to contact David Hereward at NFER on 01753 637352, or by email to d.hereward@nfer.ac.uk

We would be most grateful if you could complete this questionnaire by **23rd September**.

Please use the buttons at the bottom of the page to move through the survey. Please do not use your browser's forward and back buttons.

Also, please note that if the survey is left inactive for over 20 minutes you will be timed out and will need to restart the survey. If you exit the survey before the end, your partial answers (i.e. any answers that you have given before exiting the survey) may still be analysed.

1. What is your job role? (Please tick one box below that best describes your role)

Classroom teacher 1

Middle leader (e.g. head of department, subject or curriculum area leader, key stage leader, pastoral services leader) 2

Senior leader (e.g. deputy or assistant headteacher) 3

Headteacher, principal or director 4

Other role (please say what) 5

2. How long have you been in the teaching profession? (Please tick the box that describes the length of your whole teaching career, including career breaks)

30 years or more	<input type="checkbox"/>	1	5-9 years	<input type="checkbox"/>	4
20-29 years	<input type="checkbox"/>	2	1-4 years	<input type="checkbox"/>	5
10-19 years	<input type="checkbox"/>	3	First year of teaching (NQT)	<input type="checkbox"/>	6

3. This question aims to find out how (if at all) you use research information in your work. By 'research' we mean information from books, reports, articles, summaries, training or events that is based on academic studies.

Please indicate the extent to which you agree or disagree with the following statements.
(Please tick one box in each row).

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	1	2	3	4	5
Information from research plays an important role in informing my/our teaching practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not believe that using information from research will help to improve pupil outcomes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know where to find relevant research that may help to inform teaching methods/practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My school leaders/governors do not encourage me to use information from research to improve my practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to relate information from research to my context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other staff in my school rarely use information from research to inform their teaching practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel confident about analysing information from research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information from research conducted elsewhere is of limited value to our school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I use information from research to help me to decide how to implement new approaches in the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. In the last year, how often have you used information from research evidence to inform your practice? (Please tick one box only)

Weekly	<input type="checkbox"/>	1
Half termly	<input type="checkbox"/>	2
Termly	<input type="checkbox"/>	3
Annually	<input type="checkbox"/>	4
Not at all	<input type="checkbox"/>	5

If 'Not at all', please give reasons and go to question 6. (Q4=5)

5. Which, if any, of the following sources have you used in the last year to help improve teaching and learning (Please tick all that apply)

Ideas generated by me or my school	<input type="checkbox"/>	1
Ideas from other schools	<input type="checkbox"/>	2
Advice from my local authority or academy chain	<input type="checkbox"/>	3
Articles, reports, books or summaries based on academic research (paper or web based)	<input type="checkbox"/>	4
Articles, reports, books or summaries based on teacher experience (paper or web based)	<input type="checkbox"/>	5
The promotional materials of an external supplier	<input type="checkbox"/>	6
Action research conducted by me or my colleagues	<input type="checkbox"/>	7
Information gathered through training/CPD	<input type="checkbox"/>	8
Online education databases	<input type="checkbox"/>	9
Guidance from official bodies such as DfE and Ofsted	<input type="checkbox"/>	10
Guidance from exam boards	<input type="checkbox"/>	11
Other (please say what)	<input type="checkbox"/>	12

Evidence for the Frontline (E4F) is a brokerage service to support schools to engage with, understand and use research evidence more effectively. If teachers or school leaders have a question about research relating to their teaching or school policies they can submit their query to the service. A broker (e.g. senior school leader/research expert) will then signpost them to relevant evidence about improving outcomes in that area. The broker may also put schools in touch with evidence experts or other schools working on a similar issue to help answer their question.

- 6a. Are you already aware of the E4F service? (i.e. before completing the survey today, had you already heard about the E4F service) (please tick one box)

Yes ₁

No ₂

- 6b. How interested are you in using this service? (please tick one box)

Very interested

₁

Quite interested

₂

Slightly interested

₃

Not interested

₄

Don't know

₅

If 'Not interested' please go to question 10 (Q6b=4)

7. To what extent do you agree with the following statements (Please tick one box in each row)

I will use the service because (I think) ...	Strongly agree 1	Agree 2	Disagree 3	Strongly disagree 4	Don't know 5
...it will be straightforward to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...it will help me improve my teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...it will improve my school's approach to using research evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...it will be an effective use of my time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...it will be backed by academic research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...it will give me opportunities to discuss research evidence with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. To what extent do you think the following elements of the brokerage service will be useful to you?

I think it will be useful to

	Very useful 1	Quite useful 2	Neither useful or not useful 3	Not useful 4	Don't know 5
Speak to a broker (e.g. senior school leader/research expert) to help me formulate my research question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Email a broker to help me formulate my research question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have my question answered with links to resources and research evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Search an online database of evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have my question answered by a research expert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have my question answered by staff in another school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Do you envisage any challenges associated with your intended use of the service?

10. Why do you think you will not use the service? (Only for those who said they would not use in Q 6) (Q6b=4)

We are requesting your name and contact details so that we can get in touch with you in the Summer term 2016 to ask you to complete a follow-up survey. This contact data will not be used for any other purpose.

11a. Please provide your name:

First Name _____

Surname _____

11b. Please provide the best email address to contact you on: _____

Thank you very much for completing our survey

We hope you have found this survey interesting. Please click Next to submit your answers. Once submitted, you will not be able to go back and change any of your answers.

Follow up questionnaire

Evidence for the Frontline (E4F) brokerage service

Thank you very much for taking part in this survey. Your responses will contribute to an evaluation being conducted by the National Foundation for Educational Research (NFER) on behalf of the Education Endowment Foundation (EEF). The evaluation is exploring Evidence for the Frontline (E4F) – a brokerage service being developed to signpost teachers and school leaders to research evidence and research experts.

The survey should take no more than 20 minutes to complete.

All data gathered in this survey will be treated in strict confidence and will be anonymised in line with the Data Protection Act 1998. The individually anonymised dataset from this survey will be shared by NFER with EEF and the Fischer Family Trust (FFT) (the organisation that manages EEF's data archive). It will be stored on the EEF data archive and UK Data Archive for research purposes. This may include, for example, linking the anonymous dataset to the National Pupil Database (held by the DfE) and other official records.

No individual staff members will be identified in any report arising from this evaluation.

If you have any queries about completing this questionnaire, or would like further information about the evaluation exercise, please contact David Hereward at NFER on 01753 637352, or by email d.hereward@nfer.ac.uk

We would be most grateful if you could complete this questionnaire by 8th July.

Please use the buttons at the bottom of the page to move through the survey. Please do not use your browser's forward and back buttons.

Also, please note that if the survey is left inactive for over 20 minutes you will be timed out and will need to restart the survey. If you exit the survey before the end, your partial answers (i.e. any answers that you have given before exiting the survey) may still be analysed.

Evidence for the Frontline (E4F) is a brokerage service to support teachers and school leaders to engage with, understand and use research evidence more effectively. If you have a question about research relating to teaching or school policies, you can submit your query to the service via the E4F broker. An E4F broker will then signpost you to relevant evidence about improving outcomes in that area. The E4F broker may put you in touch with an evidence expert, and/or with other schools working on a similar issue to help answer your question.

About you

A. What is your job role? (Please select one answer below that best describes your role)

Classroom teacher 1

Middle leader (e.g. head of department, subject or curriculum area leader, key stage leader, pastoral services leader) 2

Senior leader (e.g. deputy or assistant headteacher) 3

Headteacher, principal or director 4

Other role (please say what) 5

B. How long have you been in the teaching profession? *(Please select one answer that best describes the length of your whole teaching career, including career breaks)*

- 30 years or more ₁ 5-9 years ₄
 20-29 years ₂ 1-4 years ₅
 10-19 years ₃ First year of teaching (NQT) ₆

Your experience of using the service

1. Have you used the E4F service in the following ways: *(please select one answer per row)*

- a) posted a question on the E4F website yourself? Yes ₁ No ₂
 b) used the E4F website to view the questions and answers posted by other users? Yes No

2. Have you had any communication with an E4F broker as part of asking a question? *(The E4F broker is your first port of call within the service. The broker may help you with posing your question. They may then put you in touch with a research expert – there are some questions later to cover that. Please think here about the E4F broker.)*
(please select one only)

Yes ₁ No ₂

3. How useful did you find it to:

	Very useful ₁	Quite useful ₂	Neither useful or not useful ₃	Not useful ₄	N/A (we did not communicate in this way) ₅
Speak to the E4F broker to help me formulate my research question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Email the E4F broker to help me formulate my research question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use the E4F website itself to liaise with the E4F broker to help me formulate my research question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How many questions have you posted on the E4F website? *(please select one only)*

- 1 ₁
 2 ₁
 3 ₁
 More than 3 ₁

2

5. Of these, how many of your questions have been answered to date?
(please select one only)

0 1

1 1

2 1

3 1

More than 3 1

6. Thinking about how you received your answer(s), to what extent was it useful to:

Please select one answer in each row

	Very useful 1	Quite useful 2	Neither useful or not useful 3	Not useful 4	Not applicable/question not answered in this way 5
Have my question answered with links to resources and research evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Search an online database of evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have my question answered by a research expert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have my question answered by staff in another school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. To what extent do you agree with the following statements Please select one answer in each row

When I used the E4F service, I found ...	Strongly agree 1	Agree 2	Disagree 3	Strongly disagree 4	Don't know / N/A 5
... it straightforward to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...it helped me improve my teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... it improved my school's approach to using research evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... it to be an effective use of my time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... it to be backed by academic research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... it provided opportunities to discuss research evidence with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... the answers provided were useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... the answers provided were of high quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... the answers provided a balanced view	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... the answers were provided quickly enough for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... the website was easy to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Overall, to what extent are you satisfied with the following aspects of the service? (Please answer on a scale of 0 – 10, where 0 is not at all satisfied, and 10 completely satisfied)

To what extent are you satisfied with: (please select one box only per row)

a) ... the way the E4F brokerage service operates?

b) ... the answers provided through the E4F service?

[0 – 10 labels]

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Any differences made to you, your teaching, your pupils and your school

The following questions focus on whether the research answer(s) you have received through the E4F brokerage service has/have made a difference to you, your teaching, your pupils and the wider school.

9. Thinking about the answer(s) you have received, what difference, if any, has it/have they made to ...*(please select one answer per row)*

	No difference at all (1)	A little difference (2)	Some difference (3)	A great deal of difference (4)
... your interest/enthusiasm for using research evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... your awareness of new techniques/approaches to apply in your teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... your understanding of new ideas, knowledge/information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... your practice in the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... your pupils' learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... your schools' policies and plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Can you provide one example of how an answer you received has made a difference to yourself, your teaching, your pupils or the wider school? And what difference has it made? *(please type in the box below)*

Developing the service further

11. How interested are you in using this service again or in the future? (please select one only)

Very interested	<input type="checkbox"/>	1
Quite interested	<input type="checkbox"/>	2
Slightly interested	<input type="checkbox"/>	3
Not interested	<input type="checkbox"/>	4
Don't know	<input type="checkbox"/>	5

12. What, if any, were the key challenges/difficulties you experienced in relation to the service? If you have not used the service, please include your reasons here (please type in the box below)

Some questions about your use of research evidence

13. This question aims to find out how (if at all) you use research information in your work. By 'research' we mean information from books, reports, articles, summaries, training or events that is based on academic studies.

Please indicate the extent to which you agree or disagree with the following statements. (Please select one answer for each row).

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	1	2	3	4	5
Information from research plays an important role in informing my/our teaching practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not believe that using information from research will help to improve pupil outcomes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know where to find relevant research that may help to inform teaching methods/practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My school leaders/governors do not encourage me to use information from research to improve my practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to relate information from research to my context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other staff in my school rarely use information from research to inform their teaching practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel confident about analysing information from research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information from research conducted elsewhere is of limited value to our school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I use information from research to help me to decide how to implement new approaches in the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14a. In the last year, how often have you used information from research evidence to inform your practice? (Please select one only)

- | | | |
|-------------|--------------------------|---|
| Weekly | <input type="checkbox"/> | 1 |
| Half termly | <input type="checkbox"/> | 2 |
| Termly | <input type="checkbox"/> | 3 |
| Annually | <input type="checkbox"/> | 4 |
| Not at all | <input type="checkbox"/> | 5 |

14b. If 'Not at all', please give reasons

15. Which, if any, of the following sources have you used in the last year to help improve teaching and learning Please select all that apply

- | | | |
|--|--------------------------|----|
| Ideas generated by me or my school | <input type="checkbox"/> | 1 |
| Ideas from other schools | <input type="checkbox"/> | 2 |
| Advice from my local authority or academy chain | <input type="checkbox"/> | 3 |
| Articles, reports, books or summaries based on academic research (paper or web based) | <input type="checkbox"/> | 4 |
| Articles, reports, books or summaries based on teacher experience (paper or web based) | <input type="checkbox"/> | 5 |
| The promotional materials of an external supplier | <input type="checkbox"/> | 6 |
| Action research conducted by me or my colleagues | <input type="checkbox"/> | 7 |
| Information gathered through training/CPD | <input type="checkbox"/> | 8 |
| Online education databases | <input type="checkbox"/> | 9 |
| Guidance from official bodies such as DfE and Ofsted | <input type="checkbox"/> | 10 |
| Guidance from exam boards | <input type="checkbox"/> | 11 |
| Other (please specify) | <input type="checkbox"/> | 12 |

Thank you very much for completing our survey

We hope you have found this survey interesting. Please click Next to submit your answers. Once submitted, you will not be able to go back and change any of your answers.

Appendix H: Item level statistics for outcome measures

The item level statistics for the outcome measures 3 and 4, at baseline and at follow up, are provided in the tables below.

Table H1: Baseline responses to items for Measure 3

Baseline responses to items for Measure 3	Strongly agree % (N)	Disagree % (N)	Neither agree nor disagree % (N)	Agree % (N)	Strongly disagree % (N)	Total % (N)
I do not believe that using information from research will help to improve pupil outcomes	28% (N=142)	53% (N=272)	13% (N=64)	5% (N=26)	1% (N=5)	100% (N=509)
Information from research conducted elsewhere is of limited value to our school	17% (N=89)	51% (N=258)	22% (N=1110)	9% (N=45)	1% (N=7)	100% (N=510)

A series of single response questions.

A total of 515 respondents could have answered these questions.

A total of 511 respondents gave at least one response to these questions.

Source: NFER E4F baseline survey, September 2015.

Table H2: Baseline responses to items for Measure 4

Baseline responses to items for Measure 4	Strongly Disagree % (N)	Disagree % (N)	Neither agree nor disagree % (N)	Agree % (N)	Strongly agree % (N)	Total % (N)
My school leaders/governors do not encourage me to use information from research to improve my practice	28% (N=145)	41% (N=211)	19% (N=99)	9% (N=440)	2% (N=12)	100% (N=511)
Other staff in my school rarely use information from research to inform their teaching practice	8% (N=41)	34% (N=173)	43% (N=218)	14% (N=73)	1% (N=4)	100% (N=509)

A series of single response questions.

A total of 515 respondents could have answered these questions.

A total of 511 respondents gave at least one response to these questions.

Source: NFER E4F baseline survey, September 2015.

Table H3: Follow-up responses to items for Measure 3

Endpoint responses to items for Measure 3	Strongly disagree % (N)	Disagree % (N)	Neither agree nor disagree % (N)	Agree % (N)	Strongly agree % (N)	Total % (N)
I do not believe that using information from research will help to improve pupil outcomes.	23% (N=37)	54% (N=86)	14% (N=23)	5% (N=8)	3% (N=5)	100% (N=159)
Information from research conducted elsewhere is of limited value to our school	13% (N=21)	60% (N=95)	21% (N=33)	4% (N=6)	2% (N=3)	100% (N=158)

A series of single response questions.

A total of 171 respondents could have answered these questions.

A total of 159 respondents gave at least one response to these questions.

Source: NFER E4F follow-up survey summer term 2016.

Table H4: Follow-up responses to items for Measure 4

Endpoint responses to items for Measure 4	Strongly disagree % (N)	Disagree % (N)	Neither agree nor disagree % (N)	Agree % (N)	Strongly agree % (N)	Total % (N)
My school leaders/governors do not encourage me to use information from research to improve my practice	33% (N=52)	48% (N=77)	11% (N=17)	4% (N=6)	4% (N=7)	100% (N=159)
Other staff in my school rarely use information from research to inform their teaching practice	11% (N=17)	41% (N=65)	31% (N=50)	12% (N=19)	5% (N=8)	100% (N=159)

A series of single response questions.

A total of 171 respondents could have answered these questions.

A total of 159 respondents gave at least one response to these questions.

Source: NFER E4F follow-up survey summer term 2016.

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