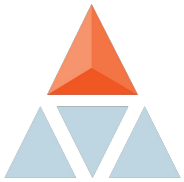

Education
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Foundation

Teachers' engagement with research: what do we know?

A research briefing

Independent researchers:

Matt Walker, Julie Nelson, and Sally Bradshaw with Chris Brown (University of Portsmouth)

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.

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- evaluating these innovations to extend and secure the evidence on what works and can be made to work at scale; and
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The EEF was established in 2011 by the Sutton Trust as lead charity in partnership with Impetus Trust (now part of Impetus - Private Equity Foundation) and received a founding £125m grant from the Department for Education.

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For more information about the EEF or this report please contact:

Jonathan Kay
Research and Publication Manager

Education Endowment Foundation
5th Floor, Millbank Tower
21–24 Millbank
SW1P 4QP
p: 020 7802 1679
e: jonathan.kay@eefoundation.org.uk
w: www.educationendowmentfoundation.org.uk

About the research team

This study was undertaken by the National Foundation for Educational Research (NFER) together with the University of Portsmouth. The principal investigator was Dr Julie Nelson, and the project manager was Matt Walker from NFER's Centre for Policy and Practice Research. Professor Chris Brown was a consultant and Sally Bradshaw was the study's statistician.

Contact details:

National Foundation for Educational Research (NFER)
The Mere
Upton Park
Slough
Berkshire
SL1 2DQ

p: 01904 567646
e: **m.walker@nfer.ac.uk**

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The study

This research briefing summarises findings from a nationally representative survey of schools and teachers, which investigated teachers' research use. The survey was designed with reference to the principles adopted in an earlier 2014 study in which the National Foundation for Educational Research (NFER) and the Education Endowment Foundation (EEF) developed a Research Use Survey (RUS) (Nelson *et al.,* 2017). The new survey took the most effective elements of the RUS, and augmented these with recent knowledge about research engagement and use. The findings are based on survey results from 1,670 teachers in England. The survey was administered between 19 September and 12 November 2017.

A note on reporting

All of the percentages reported are based on weighted data to ensure the responses are nationally representative of: *schools* in terms of phase (primary or secondary), the proportion of pupils eligible for free school meals (FSM), and the proportion of pupils in different attainment bands and: *teachers* in terms of seniority (whether teachers were senior leaders or middle leaders/class teachers). Where we refer to 'teachers', we are referring to the combined responses of all respondents.

Key findings

Academic research has a relatively small impact on teachers' decision-making

As in the RUS survey, this survey began by asking teachers questions about the *relative* influence that different sources of information had on decisions about their teaching and learning or whole-school change. In the RUS report (Nelson *et al.,* 2017) we discovered that information based on academic research had only a small to moderate influence on teachers' decision making. Findings from this recent survey were very similar. We found that teachers were much more likely to draw ideas and support from their *own experiences* (60 per cent of respondents identified 'ideas generated by me or my school'), or *the experiences of other teachers/schools* (42 per cent of respondents identified 'ideas from other schools'), when deciding on approaches to support pupil progress*.* In addition, *non-research-based continuing professional development (CPD)* was also cited as an important influence (54 per cent of respondents identified 'information from CPD' and of these, 84 per cent said that the CPD was based on information other than academic research). This suggests that there has been no particular growth in the use of research evidence as a source of influence in school decision making since the RUS was administered in 2014. Across both surveys, the three most commonly cited influences (*teacher/school-generated ideas; information from CPD; and ideas from other schools*) were the same.

However, teachers believe that their schools have climates that support evidence use, and teachers generally have positive dispositions towards research

For the first time, in the new survey, we asked questions about the school environment. This was because a number of research studies have shown that positive school cultures, in which teachers are encouraged and trusted to collaborate, investigate, experiment and take informed risks are often correlated with high levels of research engagement (see, for example, Brown and Zhang, 2016; Brown, Daly and Liou, 2016; Coldwell et al., 2017; Galdin-O'Shea, 2015; Nelson and O'Beirne, 2014; Roberts, 2015). The survey results showed that high proportions of teachers reported positive climates for professional learning and evidence use in their schools (for example, 73 per cent 'agreed' or 'strongly agreed' with the statement 'my school facilitates a professional learning community'). However, we found that smaller proportions believed that their schools had *formal processes* or made *resources* available to help them critically engage with such sources (for example, only 40 per cent of respondents 'agreed' or 'strongly agreed' with the statement 'my school has formal processes to help staff critically

engage with information sources', and only 35 per cent 'disagreed' or 'strongly disagreed' that 'my school does not make time available for staff to use a variety of information sources').

In spite of the fact that academic research was found to have a fairly limited impact on teachers' decision making relative to other sources, the majority of respondents showed a positive disposition towards academic research when they were asked a series of direct questions about it. Both findings correspond with learning from the RUS, demonstrating that teachers tend to report positively about their own or their schools' beliefs and values, but are less able to provide evidence of practice change or of supporting structures and resources.

Different groups of teachers responded differently to the survey

In order to summarise information from all the survey questions into a smaller set of reliable measures, we ran factor analysis on the survey data. Factor analysis is a statistical technique that is used to explain variability among responses and identify trends in the data. Any answers that are correlated across the survey are grouped together into single 'factors', which have greater reliability than individual answers. The analysis generated two factors.

1. **School has a positive/enabling research culture** – for example, this factor included items relating to schools: having formal processes for helping staff to engage critically with information sources; valuing experimentation and the introduction of new ideas; and facilitating collaborative learning.

2. **Individual uses research to inform selection of teaching approaches** – for example, this factor included items relating to teachers reporting that: research plays an important role in informing their practice; they have adopted new teaching techniques based on the findings from research; and they use research findings to make changes to their practice.

We used these factors to explore variation in responses according to four *school-level* variables (school phase; geographical region; free school meal (FSM) eligibility and pupil attainment) and two *teacher-level* variables (teacher seniority and time in teaching). We found that:

- *Primary school teachers* were significantly more likely than secondary school teachers, and *senior leaders* were significantly more likely than middle leaders/classroom teachers to believe that their schools had a positive/enabling research culture (**factor 1**).
- *Primary school teachers* were significantly more likely than secondary school teachers, and *senior leaders* were significantly more likely than middle leaders/classroom teachers to report that they used research to inform the selection of teaching approaches. These findings differ to those in the RUS report (Nelson *et al.,* 2017), where teachers in secondary schools demonstrated higher levels of research engagement on average than teachers in primary schools across most measures. However, in that report most of the findings were not significant and therefore could have arisen by chance. Additionally, the current survey is based on a nationally representative sample at teacher as well as school level, and therefore we can consider the results more reliable.
- *South West schools* were significantly more likely than North East schools, and schools with the *lowest 25 per cent of attainment* were significantly more likely than those with the highest 25 per cent of attainment to report that they used research to inform the selection of teaching approaches. The same was true for *teachers with four or fewer years of experience* than for teachers with 20 years or more experience (**factor 2**).

There were no significant differences in factor scores between respondents in schools with different percentages of children eligible for FSM.

Summary

This briefing provides a useful indication of current levels of teacher research engagement across English schools. It suggests that academic research still has only a small to moderate influence on teachers' decision-making relative to other sources and indicates that there is still work to do to maximise the benefits of research in school practices. Results show that there is a willingness among teachers to engage with research evidence and also that many schools have climates which are supportive of evidence use, so it appears that there is a promising base upon which to build. Currently, however, teachers are most likely to draw on their own expertise, or that of their colleagues, when making decisions about teaching and learning or whole-school change. This suggests that those with an interest in supporting research-informed practice in schools should consider working with and through schools, and those that support them, to explore their potential for brokering research knowledge for other schools and teachers.

Survey design and administration

Survey design and administration took place between June and October 2017. There were three phases of work, as summarised below.

1. Survey design

NFER developed the survey following the same principles as those adopted for the RUS. The key principle was to avoid 'priming' teachers about our primary interest – their uses and views of research evidence in order to avoid socially desirable responses (i.e. receiving responses that teachers thought we wanted to hear). In an opening question in the survey, we therefore asked teachers to identify a specific approach that they had started to use within their school in the past two years to support pupils' progress. By 'anchoring' our survey questions around a specific activity or teaching approach in this way, we believe that we were able to gain a more realistic insight into the role of research in informing decision making, alongside a variety of other factors. We did not introduce any questions that were explicitly about research use until later in the survey.

We used the same definition of research engagement for this survey as for the RUS. First, we applied the following three constructs which, when combined, created a full picture of research engagement. These were:

- **access and awareness** – believing in the value of research evidence; knowing about research evidence; knowing how to locate it; and actually accessing research evidence
- **understanding and persuasion** – understanding what the research evidence says; knowing how to critique it; believing in the findings (if reliable); and understanding the implications for classroom practice
- **translation and action** – knowing how to apply research evidence in practical situations; changing behaviour or approach on the basis of research evidence; and using research evidence to make a difference in the school.

Second, we took into account that research engagement is a term that means different things to different people. It captures a range of activities including, for example, the use and application of academic research, as well as teacher-led research and enquiry activities. For the purposes of our analysis, and in agreement with the EEF, we focused specifically on teachers' uses of academic research, and 'scored' specific survey responses accordingly as a marker of 'research engagement'. While this focus is arguably a little narrow, we needed to ensure that we were capturing a measurable phenomenon, and one that would be of maximum benefit for the EEF's activities and priorities. This is not to suggest that other forms of research engagement and use are not important. Our definition of teacher research engagement incorporated:

- teachers' uses of externally-produced academic research (rather than teacher-led research or enquiry).
- teachers' explicit awareness of their direct use of research (rather than the various indirect means by which research can be communicated to teachers through conversations, social media and so on).

Finally, we used factor analysis to analyse the survey data and to construct a number of research engagement outcome measures.

2. Cognitive interviewing and peer review

Between July and August 2017 the survey underwent peer review from prominent academics working in this field (see acknowledgements). We are grateful to these colleagues for commenting on and helping to strengthen the survey. The instrument was then cognitively piloted[1] with two teachers to check the functioning of the survey items and to ascertain where amendments were needed. After piloting, the survey was adapted and a final version created, following which it was programmed to enable online administration.

3. Sampling and administration

We undertook sampling in three-phases to ensure that our achieved sample was nationally representative at both teacher school levels. The three phases were:

1. an initial sample was drawn from NFER's Teacher Voice Panel[2] (September 2017)
2. an additional representative top-up sample was drawn from a random sample of schools in England to boost the response rate (October 2017)
3. Teacher Voice respondents were invited to refer the survey to colleagues within their schools (November 2017).

The survey ran from 19th September 2017 to 12th November 2017. NFER monitored the responses daily according to a range of target quotas – closing the survey to key groups of teachers as each quota became full. In total responses were received from 1670 teachers.

[1] A qualitative tool for pre-testing a survey instrument to check its cognitive validity, that is, whether the items mean to respondents what they mean to the item designers.
[2] A regular, fast-turnaround survey service that enables professional organisations to access up-to-the-minute views from a nationally representative sample of teachers on topical issues.

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The Education Endowment Foundation
9th Floor, Millbank Tower
21–24 Millbank
London
SW1P 4QP
www.educationendowmentfoundation.org.uk