

**The  
Brilliant  
Club**

**Impact Case Study Series**

**Transforming PhD  
graduates into  
research-engaged  
teachers**

March 2021



## About The Brilliant Club

The Brilliant Club exists to increase the number of pupils from underrepresented backgrounds that progress to highly-selective universities. We do this by mobilising the PhD community to share its expertise with state schools. In pursuit of this mission, The Brilliant Club delivers two programmes:



**The Scholars Programme** recruits, trains and places doctoral and postdoctoral researchers in schools to deliver programmes of university-style tutorials, which are supplemented by two university trips.



**Researchers in Schools** recruits PhD graduates, places them as trainee teachers in schools and supports them to develop as excellent teachers and research leaders committed to closing the gap in attainment and university access.



**The Brilliant Tutoring Programme** aims to re-engage and rebuild pupils' confidence in core subjects by working with a subject expert. We are an approved Tuition Partner of the National Tutoring Programme.

Find out more about our work on our website at [www.thebrilliantclub.org](http://www.thebrilliantclub.org).

## Research and Impact Series

This **Impact Case Study** forms part of our **Research and Impact Series**, which provides several ways to engage with the work of The Brilliant Club's Research and Impact Department and that of our partners. More information and previous publications in the series are available on The Brilliant Club's [website](#).

## About the Author

This case study was written by **Dr Katie Jones** and data analysis was conducted by **Lottie Norton**. Katie is the Research and Evaluation Manager at The Brilliant Club and works to support the charity's programme teams and our partner organisations to better understand their impact. Previously, she worked as a researcher at the University of Warwick and completed her PhD in cognitive psychology.

## Contact Details

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## Introduction

Teacher quality is one of the biggest influences on a young person's academic success. This is especially true for pupils from disadvantaged backgrounds, where the difference between a 'good' and a 'bad' teacher is a whole year's worth of learning (The Sutton Trust, 2011). Because of the impact of teacher quality on children's academic achievement, it is critical that we understand the ways in which teacher quality can be developed and enhanced.

A number of factors contribute to high-quality teaching and one that is particularly important is a teacher's ability to use academic research to inform their practice (Tripney et al, 2018). One area of research that has made significant contributions to the understanding of effective teaching and learning practice is cognitive psychology, which has identified several fundamental learning principles (Dunlosky et al., 2013). Unfortunately, teachers often have no or very limited exposure to this research during their teacher training (Weinstein, Madan, & Sumeracki, 2018).

Notably, in recent years, a small number of teacher-led movements have been set up in the UK to bridge the gap between academic research and teaching practice. For example, [researchED](#) run a series of national and international conferences on evidence-based education (researchED, 2013), and the [Chartered College of Teaching](#) provides a professional forum for teachers to engage with research. These initiatives have started to increase teachers' general awareness of research and its application to education, but there is still a long way to go before academic research is fully integrated into teaching practice. We argue that to fully connect research and practice, two things need to happen: 1) research needs to be explicitly and routinely built into initial teacher training programmes and 2) individuals who have expertise in research need to be present in the classroom, for sustained periods, to fully embed pedagogical implementation.

In this case study we discuss our Researchers in Schools (RIS) programme, which seeks to drive forward the two areas outlined above. Specifically, the RIS programme aims to increase the number of high-quality research-engaged teachers in state schools across England. It does this by recruiting and supporting PhD graduates to become excellent classroom teachers and champions of education research. The programme is specifically designed to utilise the research and subject-matter expertise of PhD graduates, to the benefit of pupils and schools.

The case study primarily explores how RIS teachers engage with academic research across their first three years of classroom teaching, and the findings are compared to previous studies exploring research-engagement within the general teaching population in England (Nelson et al., 2017; Walker et al., 2019). Alongside these findings, we provide examples of how the RIS programme fosters engagement with academic research as part of its initial teaching training programme. Lastly, we discuss the 'lessons learned' from our experiences of training teachers to engage with academic research, which we hope will be valuable for the wider teaching community.

## Methodology

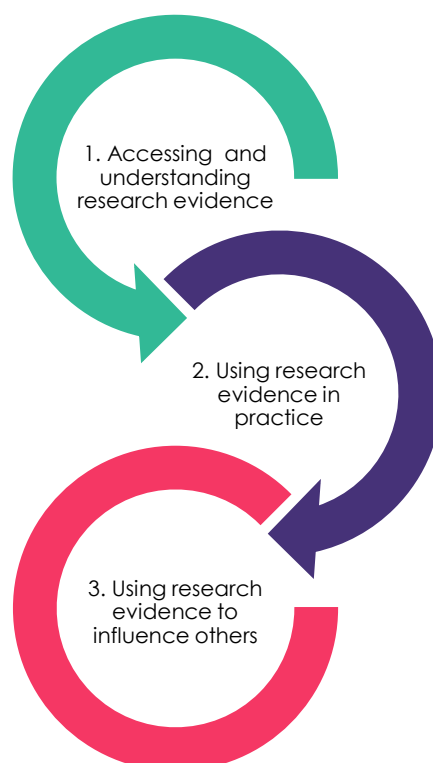
For two years in a row (November 2019 and November 2020), all teachers enrolled on the RIS programme were asked to complete the Research Use Survey. The survey was designed by the National Foundation for Educational Research (NFER) to measure teacher research engagement, as part of an Education Endowment Foundation (EEF) study (Nelson et al., 2017). In our study, a total of 137 RIS teachers completed the survey across the two years. Just under half (48%) of respondents were in their first year of the programme, 29% were in the second year and 22% in the final year. Twenty-four RIS teachers completed the survey in both 2019 and 2020.

We used the findings from the EEF study as a benchmark (both the survey and findings have been published by Nelson et al., 2017). The EEF study involved 509 respondents from 256 schools, representative of the national teaching population, who were divided roughly equally by seniority. The findings are used as a benchmark rather than a matched control comparison, given the variation in sample size and teacher demographics.

## Key findings

This report draws upon findings from the Research Use Survey to explore how RIS teachers engage with research in relation to three key themes: **theme 1** focuses on their ability to access, understand, and interpret research evidence; **theme 2** focuses on how well RIS teachers are able to apply and use research evidence in their practice; and **theme 3** explores how RIS teachers use research evidence to influence the practice of their colleagues, as shown in Figure 1 below.

**Figure 1: Three key themes used to assess research engagement.**



## Accessing and understanding research evidence

### How does the RIS programme support trainee teachers to access, understand and analyse education research?

A key benefit of the Researchers in School programme is that it recruits individuals who are already engaged in research and have an awareness of fundamental research principles.

On top of this, the programme delivers training, rooted in evidence-informed practice, which introduces RIS teachers to paradigms and methodologies used in education research. The training covers topics such as the implementation of action research, the use of randomised controlled trials and research conducted by the EEF. This knowledge is consolidated into practice through the Research and Development Project they conduct as part of the programme.

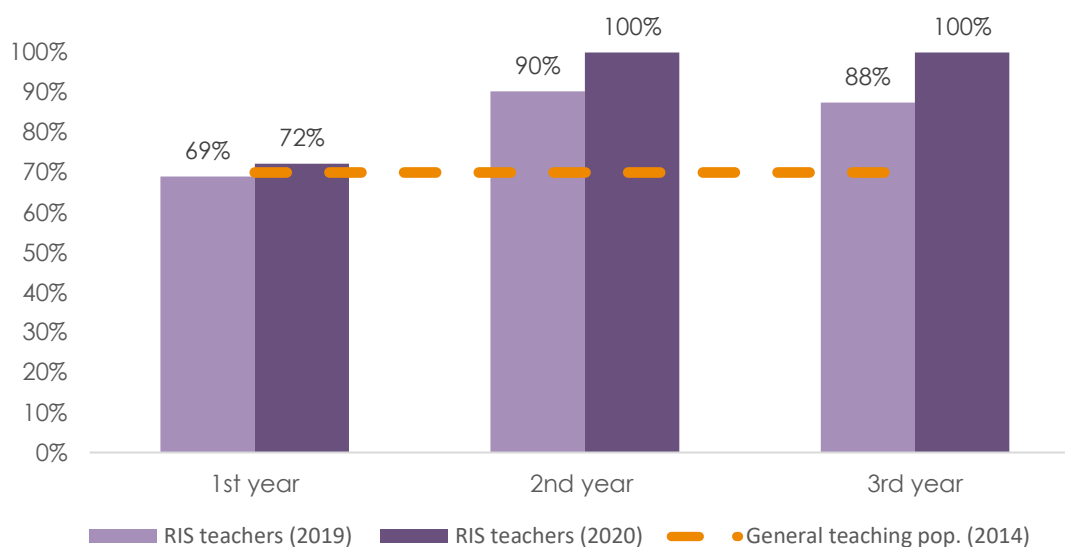
RIS teachers are, uniquely within the profession as a whole, given dedicated protected time each week (up to one full day) to complete work for the programme. This allows them valuable time and space to read, analyse, and apply research to their own classroom practice.

RIS teachers are also given Honorary Research Associate status at a UK university, which gives them access to academic research literature not widely available to the teaching profession.

### Knowing where to find relevant research

A fundamental barrier to engaging with academic research is not knowing where to find, or being unable to access, relevant sources of information. Responses to the Research Use Survey revealed that 70% of RIS participants enrolled on the first year of the programme knew where to find relevant research that may help to inform their teaching practice. This is on par with responses made by the general teaching population in 2014. **All RIS teachers enrolled on the second or third year of the programme in 2020 reported they knew where to find relevant research (see Figure 2).**

**Figure 2: Teachers who report that they know where to find relevant research that may help to inform teaching**

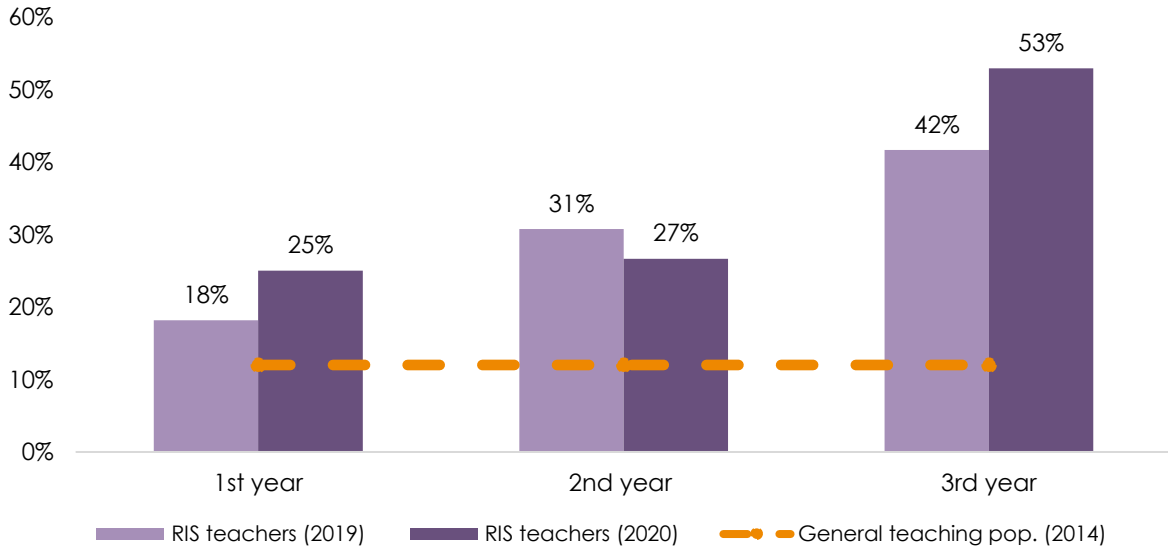


### Understanding and analysing education research

A review of evidence-informed teaching in England found that while most teachers value research evidence, they do not feel confident in interpreting and analysing academic research (Coldwell et al., 2017). The exceptions to this rule were senior leaders and teachers undergoing advanced degrees.

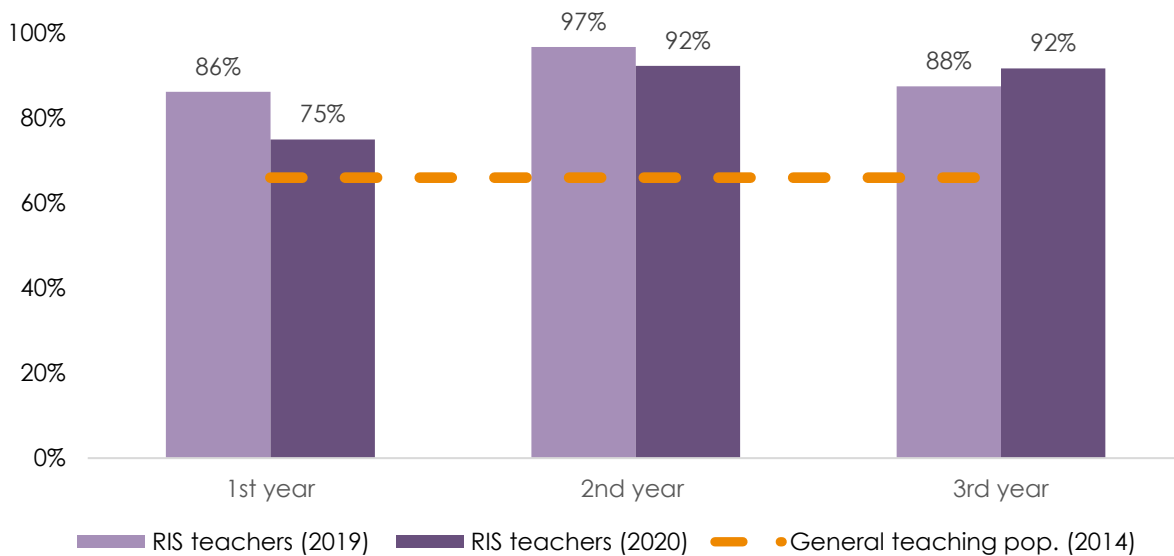
Findings from the Research Use Survey revealed that three-quarters (75%) of RIS teachers and teachers from the EEF study found academic research either “easy” or “very easy” to understand. However, only 12% of teachers from the EEF study found academic literature “very easy” to understand, compared to 25% of first year RIS participants in 2020. **The percentage of third year RIS participants who reported finding academic research “very easy” to understand was more than double that of first year participants (53% vs. 25%, see Figure 3).**

**Figure 3: Teachers who found academic research literature (articles, reports, books or summaries) 'very easy' to understand**



Overall, **87% of RIS participants reported that they felt confident analysing information from research.** In contrast, 66% of teachers participating in the EEF study were confident about analysing research, as shown in Figure 4.

**Figure 4: Teachers who report being confident about analysing research information**

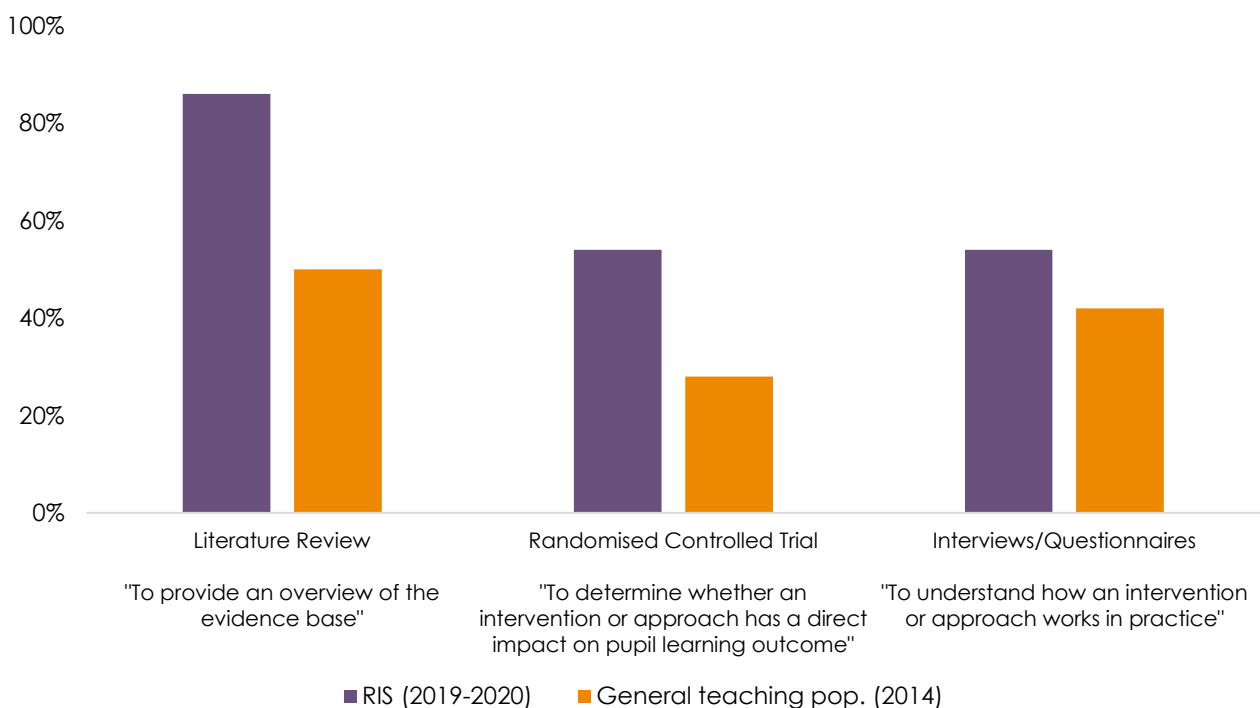


## Knowledge of research methods

To test their research methods knowledge, the Research Use Survey asked teachers to identify which of the listed research methodologies (randomised controlled trial; longitudinal study; interviews and/or questionnaires; literature review or correlational study) were most appropriate for the following three purposes: 1) to provide an overview of the evidence base; 2) to determine whether an intervention or approach has a direct impact on pupil learning outcomes; 3) to understand how an intervention or approach works in practice.

The correct matches between research methods and research purpose can be seen in Figure 5, as well as the percentage of teachers who responded correctly. The results revealed that RIS teachers had a high rate of success when matching research methods to their purpose, relative to teachers who took part in the EEF study.

**Figure 5: Percentage of teachers correctly matching the research method to its purpose**





## Using research evidence in practice

### How do RIS participants use research evidence in practice?

The RIS programme focuses on three core aims: 1) championing university access, 2) increasing subject expertise and 3) promoting education research.

Following the introduction to education research RIS participants receive in the first year of the programme, this knowledge is put into practice during their Research and Development Project, run in partnership with Sheffield Hallam University.

Example research projects undertaken:

- 'How to efficiently implement retrieval practice of old topics whilst delivering new content'
- 'Developing trainees' abilities to engage with academic research to improve their practice'
- 'What impact do targeted memory recall interventions have on successful problem solving for a top set of GCSE maths students?'

### What our partners say:

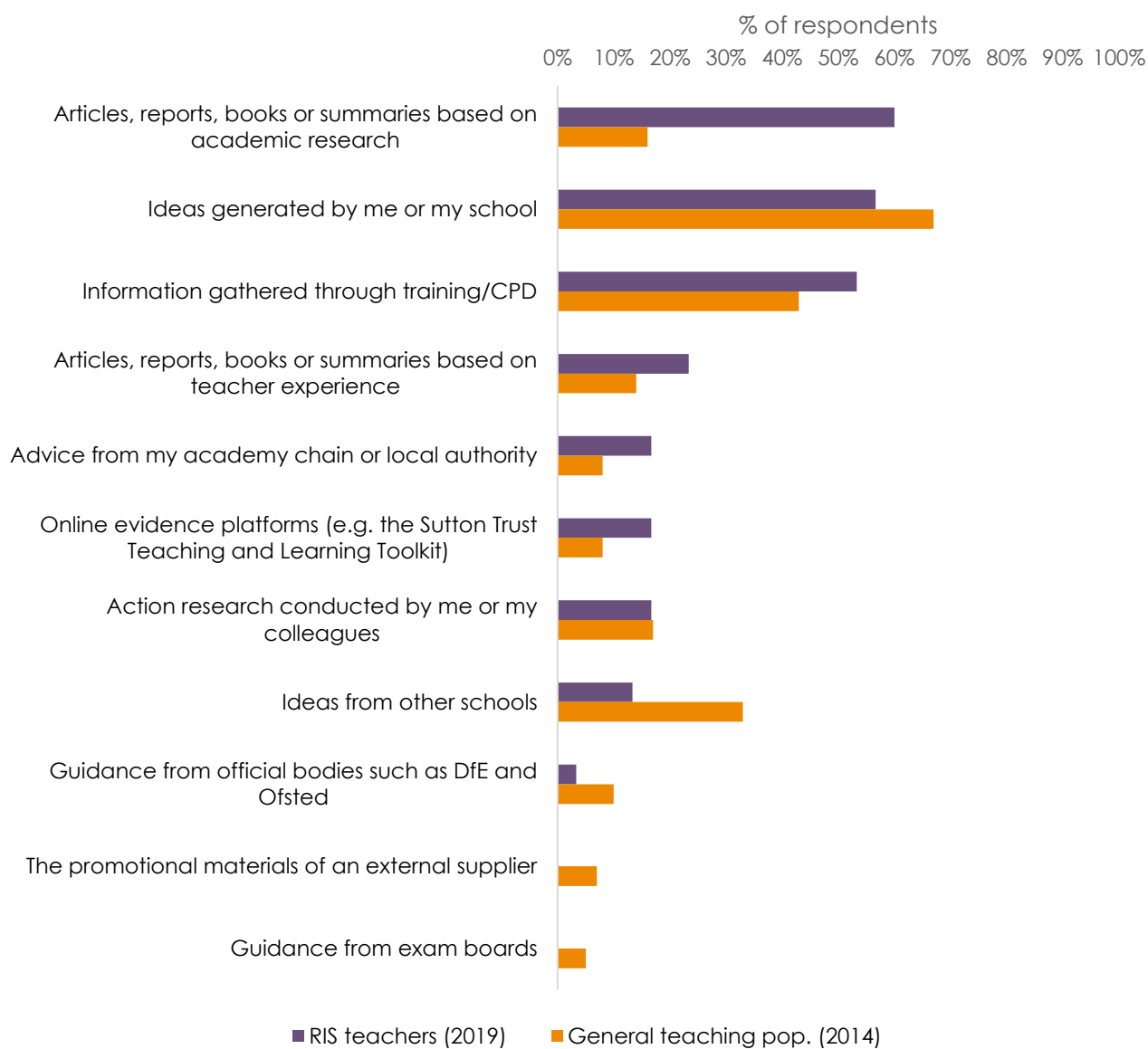
"One of the successful things about the partnership between Researchers in Schools and Sheffield Hallam University is that the projects participants do are grounded in practice; it is not just people thinking about doing research, for RIS participants it is a key part of their role.

A benefit for RIS participants is that they receive guidance from the University on how to carry out a research project in a school context and they have a chance to collaborate with colleagues." – Julie Jordan, Sheffield Hallam University

## Using research evidence to influence decision making

The Research Use Survey asked teachers to disclose an approach they have adopted over the last two years to support pupil progress. They then had to identify their top-three sources of influence when deciding to adopt this approach. **Information from academic literature was the most frequently identified source of influence by RIS teachers (selected by 60% of respondents)**, whereas only 16% of teachers from the EEF study selected academic research as a top-3 influence (Figure 6). Teachers who responded to the survey in 2014 were most likely to say that their top sources of influence were the ideas generated by themselves or their colleagues (67% of respondents).

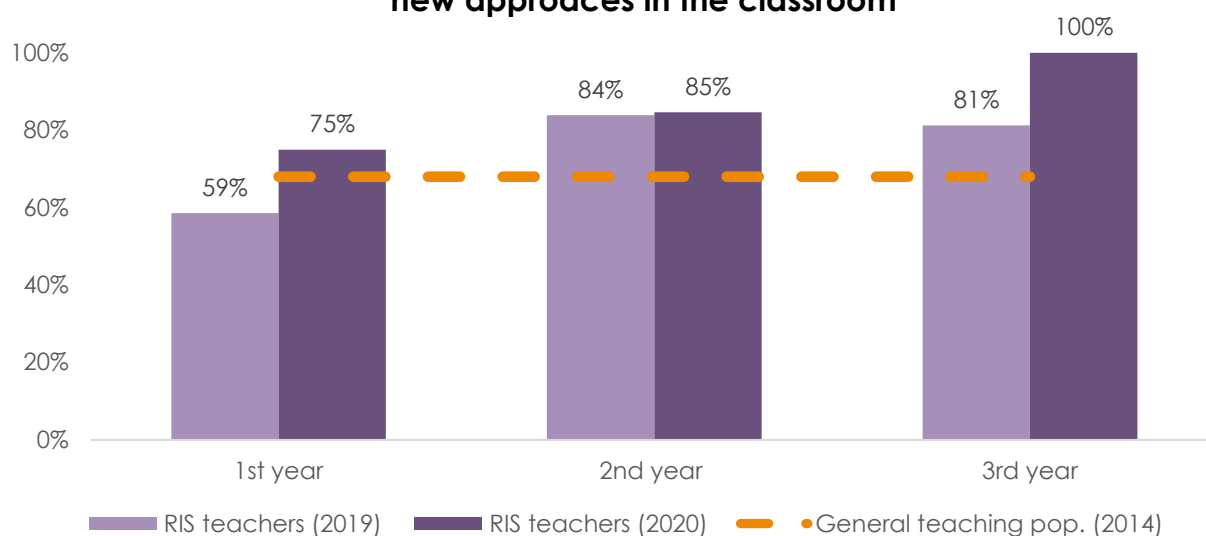
**Figure 6: Which of the following sources of information were important in adopting your chosen approach? (3 most important)**



### Using academic research to help implement new approaches in the classroom

In 2020, **all third year RIS participants reported that they had used academic research to help them implement new teaching and learning approaches in the classroom.** This is compared to 75% of first year participants and 68% of teachers who completed the survey in 2014 (Figure 7).

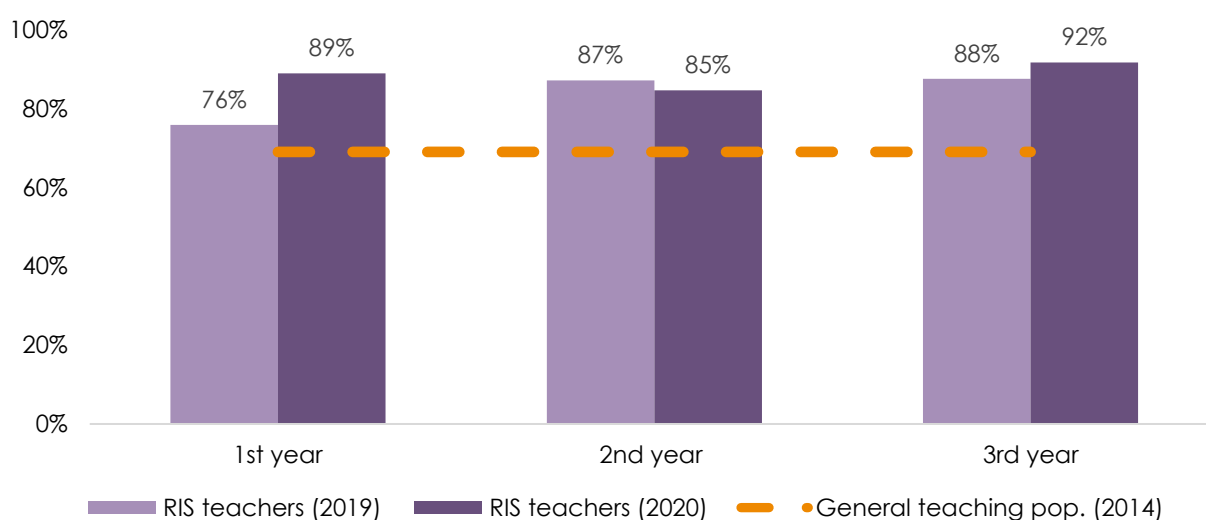
**Figure 7: Teachers who use research to help them implement new approaches in the classroom**



### Using academic research to reflect on teaching practice

A high proportion of RIS teachers (85%) who completed the survey in 2020 reported that they have used academic research to reflect on their own teaching practice. In comparison, 69% of teachers responding to the EEF study reported using academic research to reflect on their own teaching practice (Figure 8).

**Figure 8: Teachers who agreed that 'research information plays an important role in informing teaching practice'**



## Using research evidence to influence others

### How does the RIS programme support trainee teachers to use research evidence to influence others?

As part of the programme, RIS teachers are provided with opportunities to share their research expertise with the wider teaching community. Under the supervision of Sheffield Hallam University, RIS teachers design and conduct a Research and Development Project, which is then trialed by other teachers within their school. In the final year of the programme, RIS teachers disseminate their research findings through a range of CPD opportunities.

The RIS programme not only gives RIS teachers a platform within their schools to influence colleagues, but also a wider network of RIS teachers across the country with whom they can share their research findings. This broadens their knowledge on a wide range of topics including deliberate practice, meta-cognition, curriculum design and assessment practices.

Dr Tom Rae, a Physics teacher at Bohunt School, conducted a Research and Development Project investigating the barriers teachers face to becoming more engaged with education research. He ran a journal club for faculty members and assessed the impact on staff engagement. Since finishing the RIS programme, Dr Rae now works across Bohunt Education Trust as the Research and Evaluation Coordinator, raising staff engagement in education research and supporting teachers to conduct their own research.

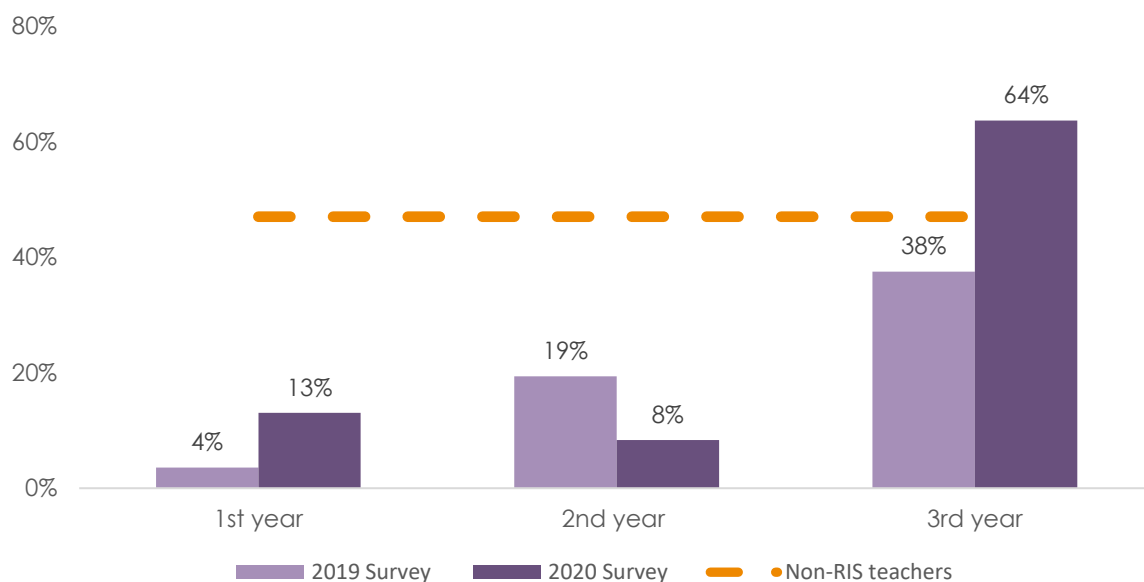
#### What our partners say:

“Participants are encouraged to share the learning from their research projects in their schools. In this way they are adding to the knowledge in the education system.” – *Julie Jordan, Sheffield Hallam University*

## Using academic research to influence colleagues

Unsurprisingly, only 13% of first year RIS teachers reported had used research evidence to influence their colleagues to change their teaching practice. However, this rose to 64% of RIS participants in their final year of the programme in 2020. In contrast, 47% of teachers responding to the survey in 2014 said they had used academic research to influence their colleagues' teaching and learning (see Figure 9).

**Figure 9: Teachers reporting that they have used academic research to influence colleagues to change their classroom practice**



## Conclusions and lessons learned

By recruiting PhD researchers into teaching, we are increasing the number of teachers who are predisposed to valuing academic research and the importance of research-informed practice. The RIS programme, through partnerships with the Department for Education and Sheffield Hallam University, supports PhD graduates to develop and apply their existing research skills to an education context. Importantly, right from the start of their teaching career, RIS teachers act as dedicated champions of education research, which has wider benefits for teaching and learning within their schools. Below we provide lessons learned from our experiences of delivering a research-driven initial teacher training route, which we hope will be valuable for the wider teaching community:

1. Give teachers time to fully understand their learning environment before implementing new teaching practices or routines.
2. Create space for teachers to engage with research, building it in at regular intervals and remembering that the spacing of research engagement is just as important as the content.
3. Support teachers to deliver small research projects or to try out particular teaching and learning strategies in their classroom as part of low-stakes implementation.
4. Build a community of research-informed teachers ('research champions') to ensure that research is sustained and embedded into school communities in the long term.
5. Finally, regarding teachers' understanding of research, teachers are not expected to have an in-depth understanding of statistics but, in our experience, a teacher does need to understand the types of research designs that are used in education studies and the conclusions that can be made from them.

## Acknowledgements

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