

# Investing in a 21<sup>st</sup>-century Educational Research System

May 2024

## Summary

In 2018 the British Academy and the Royal Society published *Harnessing Educational Research*, a report that explored the state of educational research in the UK. This was the first part of a multi-year collaboration looking into this disciplinary area. In subsequent years the two Academies carried out further research that mapped the educational research landscape, focusing on the inputs (in terms of funding) and outputs (in terms of research). The Academies also convened experts from across academia, policy, and education practice in a forum to outline the challenges and opportunities of educational research.<sup>1</sup>

This briefing provides some key observations from this programme and makes the case to government for raising levels of investment in educational research, creating a more coordinated system, and supporting research in underdeveloped and emerging areas.

### 1. Why is educational research important?

It is a truism to say that education affects us all. Nevertheless, the potential of educational research is often overlooked or unrealised by governments. Professor Anna Vignoles FBA, a scholar of education and economics, recently gave a keynote lecture at the University of Cambridge where she explained:

*You cannot have a thriving Research and Development (R&D) system nor indeed a thriving economy without first building a thriving education system. Our education system is obviously vital for many things, including the health and welfare of our society and crucially it underpins our R&D system which feeds into our economy.*<sup>2</sup>

A healthy and well-funded educational research system has the capacity to positively influence education at all levels, from early years provision to mature learning. The most recent research assessment exercise in the UK, 'REF 2021', showed that educational research in the UK is particularly strong in terms of the impact it has on society, with 80% of educational research undertaken rated as world-leading or internationally excellent in terms of the wider benefits it has to society, people, and the economy.<sup>3</sup>

These benefits can come in many forms. Educational research can: influence pedagogy and optimise learning at school; improve the life outcomes of citizens; enable a better understanding and improve the experience of pupils and students; support up-skilling and re-training workers; help to reduce inequalities; create efficiencies at schools and colleges; and increase the professional self-esteem and resilience of teachers that influences their retention and wellbeing. The knock-on economic and social impacts of all of this are profound, as seen in the rise and judged success of early intervention education programmes.<sup>4</sup>

A well-educated and highly skilled workforce is a more productive one that drives higher levels of economic growth. We should not forget the transformational impact that education also has on the individual, on their sense of themselves and their place in the world. Furthermore, educational research can contribute to some of the broader objectives or "missions" of future governments. One in ten science lessons in England are currently taught by individuals who

<sup>1</sup> The British Academy and Royal Society (2019), *Educational Research Forum: a future research agenda for educational research*.

<sup>2</sup> Vignoles, A. (2023) '*Ideas need people: building the talent pipeline for R&D*', Bennett Institute for Public Policy Annual Conference, Keynote.

<sup>3</sup> Research England, REF 2021 results <https://results2021.ref.ac.uk/unit-of-assessment-summary/23>. The Research Excellence Framework is an assessment and evaluation system used to assess the quality of research in UK higher education institutions. Conducted every seven years, all eligible institutions in the UK must submit evidence which allows panels of experts to evaluate their research outputs, the impact of the research, and the research environment in which it was conducted. The assessment aims to provide accountability for research funding and promote a culture of research excellence.

<sup>4</sup> House of Commons (2018), '*Evidence-based early years intervention*', Science and Technology Committee.

do not hold a science degree, and in England's most deprived areas, 60% of maths lessons are taught with teachers who do not have a maths degree.<sup>5</sup> If the UK is to become a science superpower, it is educational research that is going to be needed to resolve these issues.

## 2. Educational research in the UK in 2023

Research commissioned by the British Academy and the Royal Society shows that the landscape of educational research is complex.<sup>6</sup> This landscape encompasses dense networks, both national and international, of researchers collaborating across different types of institutions. One striking feature of the UK's educational research landscape is that it is comprised of a marked number of small research units scattered across the country, indeed this pattern is more pronounced in educational research than for other disciplines. Whilst research income is concentrated amongst some of the large universities and independent research organisations, these smaller units make up an important part of the system. This has implications for how we think of the "system" of educational research in the UK, and how to keep it healthy.

Accompanying this spread of researchers is a broad range of educational research topics, with strength in education policy, learning outcomes, and teacher education. The work commissioned by the Academies has helped to identify areas or research themes that were underrepresented in the educational research ecosystem. These included: artificial intelligence and education technology – particularly in light of the changes required to teaching practices during the COVID-19 pandemic; curriculum design, introduction, and evaluation; large-scale research on initial teacher training; and a lack of longitudinal research focused on the impact of education, rather than short-term learning gains. This lack of longitudinal research has been attributed to the relatively short duration of research grants; two thirds of grants awarded between 2010 and 2020 were for less than three years.<sup>7</sup>

The most recent research assessment exercise that took place in the UK, REF 2021, demonstrates that excellence in educational research is found across the country and at a wide range of institutions. 83 higher education institutions (HEIs) made submissions to sub-panel 23 (Education) for REF 2021 involving 2,367 individual researchers, an increase from 75 HEIs and a 47% increase in submitted researchers from REF 2014.<sup>8</sup> In the most recent REF, 72% of research in the field of education was assessed as world leading or internationally excellent, and world-leading research is found in every region of the UK.<sup>9</sup>

The primary funders for educational research in the UK are:

- the Economic and Social Science Research Council (ESRC), total budget £114 million.<sup>10</sup>
- the Education Endowment Foundation (EEF), total grant expenditure of £51.8 million in the 2021-2022 financial year.
- the Arts and Humanities Research Council (AHRC), total budget £61 million.

It is worth noting that, with the exception of the EEF, educational researchers are competing against multiple different disciplines for this money.

<sup>5</sup> Worth, J (2023) "Short Supply: Addressing the Post-Pandemic Teacher Supply Challenge in England" NFER <https://www.nfer.ac.uk/short-supply-addressing-the-post-pandemic-teacher-supply-challenge-in-england/>.

<sup>6</sup> Oancea, A., McDermott, T., Robson, J., Scutt, C., Xu, X., Mun, O., Nuseibeh, N. and Voss, M. (2021), *The Landscape of Educational Research in the UK (Compulsory and Post-compulsory)*. Report to the British Academy and Royal Society. Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Department for the Economy, Higher Education Funding Council for Wales, Research England, and Scottish Funding Council (2022), 'UOA 23: Education', *Overview report by Main Panel C and Sub-panels 13 to 24*, Research Excellence Framework, REF 2021, p. 157.

<sup>9</sup> Research England, REF 2021 results <https://results2021.ref.ac.uk/unit-of-assessment-summary/23> <https://results2021.ref.ac.uk/profiles/units-of-assessment/23>.

<sup>10</sup> UK Research and Innovation (2022), '2022-23 – 2024-25 budget allocations for UK Research and Innovation'; Education Endowment Foundation (2022), *EEF Annual Report. September 2021 – August 2022*, p. 29.

### 3. Comparison with health research

Educational research plays a vital role in providing evidence, direction and guidance for both policymakers and education practitioners, as does research in other areas of the public sector. But how does the overall level of investment in educational research compare with research linked to other key public services? Research commissioned by the British Academy shows R&D spend in the education sector to be considerably lower than other sectors of the economy.<sup>11</sup> More comprehensive work is needed to better understand specifically how the level of educational research (as a proportion of overall education spending) compares to that in other key areas of public investment.

One area for which we do have comparisons, is health research. Both education and health are large scale public sectors with significant levels of funding and investment. A further similarity lies in previous ideas to establish strategic coordination of education research, as found in health through the Office for the Strategic Coordination of Health Research (OSCHR).<sup>12</sup>

Preliminary comparisons made to health research spending suggest that educational research is lagging behind. In 2021/22, health research funding equated to approximately 1.7% of public investment in health, compared to just 0.05% for education research, relative to public investment in education.<sup>13</sup>

This disparity is intuitive, as the UK has its own dedicated research council, the Medical Research Council with a budget of £1.2 billion.<sup>14</sup> The health research sector is also able to readily draw on other research councils through the funding of interdisciplinary research, receiving £126 million from other research councils in 2021/22, as well as private revenue streams, with £1.4 billion coming from industry and charities during the same year.<sup>15</sup>

When it comes to education, there are not the same incentives for business or culture of philanthropy. Educational research comes primarily from the ESRC, AHRC and the EEF. Income from industry and charities, in contrast to health, only amounted to £22.7 million in 2021/22. The level of investment that health research receives dwarfs that available to educational researchers, both in absolute terms and as a proportion of overall sector spending.<sup>16</sup> Average annual funding for educational research at UK universities was reported as £55 million in REF 2021. The sub-panel noted that: “£55 million is a very small amount in the context of annual public spending on education and that there has been a decline in major national programmes of educational research compared to the period considered in REF 2014”.<sup>17</sup> Therefore, there is arguably even more onus on the state to step in to ensure that the money spent on educational research meets the desired level (relative to overall education spending).

### 4. The case for more and better coordinated investment

The comparison made to health here is not to suggest that educational research spending should match that in the health sector in absolute terms, nor that one is necessarily more important than the other. But there is an argument that, as a vital public service, investment in education research should be in line with health research as a proportion of overall health spending. The optimal proportion of R&D associated with any given area of the public sector

<sup>11</sup> Flanagan et al (2023), ‘Understanding social sciences, humanities and arts for the people and the economy (SHAPE) R&D in the UK and internationally’, A RAND report produced for the British Academy.

<sup>12</sup> The British Academy and the Royal Society (2018), *Harnessing Educational Research*.

<sup>13</sup> This is based on the main revenue streams for health research, listed above, as a proportion of health funding as defined by The Health Foundation in: Boccarini, G. (2023) *Health care funding*. The education rate is based on the average annual investment in the years 2014-2021, as recorded in the REF Panel C report, and the size of the sector as defined by the ONS in: UK Government (2022), *Education and training statistics for the UK*.

<sup>14</sup> UK Research and Innovation (2022), ‘2022-23 – 2024-25 budget allocations for UK Research and Innovation’.

<sup>15</sup> HESA data on research and contracts for clinical medicine <https://www.hesa.ac.uk/data-and-analysis/finances/income>.

<sup>16</sup> Public spending on health was approximately £282bn in 2021/22, while on education it was £105bn in 2022/23

<sup>17</sup> Department for the Economy, Higher Education Funding Council for Wales, Research England, and Scottish Funding Council (2022), ‘UOA 23: Education’, *Overview report by Main Panel C and Sub-panels 13 to 24*, Research Excellence Framework, REF 2021, p. 159.

is up for debate, and often is based on concerns over value for money. While we cannot compare rates of return on investment in educational research with other areas, we do know that education provides economic benefit at the rate of around 9% for each additional year of schooling.<sup>18</sup> To create a dynamic, effective and innovative education system, we evidently need a healthy level of research to be feeding into the system.

Of course, it is not all about the total amount of research spending in the field of education. Quality is as important as quantity. The indication from REF2021 is that the majority of educational research in the UK is high quality and has strong impact, providing justification for increased investment to provide scale. We need to better understand the extent of the relative “investment gap” linked to educational research. Moreover, the government has a responsibility to play a role in lifting the aggregate level of investment, so it is commensurate with comparable areas of public expenditure.

It is imperative that quality is maintained through this process. While previous attempts to coordinate or provide strategic oversight to the educational research sector have failed for several reasons, not least because of the complex array of those with a stake in education system, increased investment could accompany a broad strategic vision: one in which the dividends of educational research that we know already exist can be scaled up for the benefit of us all.

## 5. Recommendations

The British Academy and the Royal Society recommend three policy options for government which, if taken up, would support the strategic delivery of educational research across the UK.

### 1. Government should increase funding for educational research.

- A significant uplift in government spending on educational research would bring it into line with other public service research funding.
- As a proportion of overall education spending, educational research should resemble other government departmental spending on research, properly reflecting the importance of education for the UK’s future prosperity.

### 2. Research funders should include more long-term research funding opportunities and support for underrepresented research themes.

- Funding structures and spending have increasingly favoured short- and medium-term research at the expense of longer-term studies.
- Longitudinal research and other longer-term studies uniquely offer deeper insights into the enduring effectiveness of policy.
- Government and other funders should therefore reflect this by modifying their educational research grant programmes to incentivise applicants wishing to carry out studies of longer duration and design, as well as those focused on underrepresented and emerging research themes.

### 3. Government should pilot a model of advocacy and coordination leading to a stronger educational research infrastructure.

- An advocacy and coordinating body for educational research, that is independent of central government, could provide a mechanism to achieve these aims.
- This organisation would produce gap analyses of the research landscape to identify underrepresented priority areas for investment and activity.
- It could also provide impartial, strategic advice to government on departmental research on education.
- This would all create a more systematic approach to improving educational research infrastructure and translating findings into practice.

<sup>18</sup> Psacharopoulos, G., Patrinos, H.A. (2018), ‘Returns to Investment in Education: A Decennial Review of the Global Literature’, *World Bank*.

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