

Thematic Research Overview: Education

December 2011 – March 2022

Authors: Analytical Impact team, Secure Research Service, Office for National Statistics.

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Introduction

Insight into the way we educate individuals and the impact of educational experiences on society requires the use of robust and connected data sources.

The [Office for National Statistics \(ONS\) Secure Research Service \(SRS\)](#), [Administrative Data Research UK \(ADR UK\)](#) and [Department of Education](#) work alongside other key stakeholders to provide rich de-identified, unpublished datasets, including survey and administrative data, that offer real potential for analysis and innovative research.

The SRS is a [trusted research environment](#) that provides accredited researchers access to this data for research projects in the public good. The SRS has more than 600 live research projects covering a range of topics and analytic purposes. These are addressed by researchers across sectors, using a variety of quantitative methodologies.

This thematic overview aims to provide a snapshot of how data managed or owned by the ONS was used for research under the theme of education between December 2011 and March 2022. This snapshot covers: which datasets were used in the SRS, how they were used, the research themes addressed, and what organisations and institutions were undertaking the analysis.



Figure 1. Education research in the ONS SRS in numbers.

Scope of this review

The SRS Analytical Impact team selected and tracked projects in the SRS that were closed between December 2011 and March 2022, under the theme of education. Data was based on the intended project information supplied by researchers as part of their project accreditation through the relevant legal gateway. Information provided includes

the title, abstract, research purpose and methodology, data required, and intended public good outcomes. The team further captured published outputs and outcomes related to these projects.

The Department for Education provides access to a range of powerful new linked administrative education datasets, such as Longitudinal Educational Outcomes (LEO), Growing Up in England (GUIE), Grading and Admissions Data England (GRADE), and Ministry of Justice-Department for Education data. [ADR UK is further helping](#) to support the creation and use of research-ready data to explore links between young people and outcomes. At the time of this review, no projects using these linked datasets in the SRS had progressed to a stage where analysis was completed, or public-facing outputs were realised.

Selection approach

Several filters and relevant keyword searches were applied to the project accreditation information. Starting with terms relevant to education and young people (e.g. 'edu', 'pupil', 'child', and 'young people'), further selection was conducted based on a review of project titles and abstracts. The closing date was then reviewed, selecting projects completed or due to be completed by March 2022.

This process returned 140 education-themed projects that accessed data owned or managed by the ONS completed between December 2011 and March 2022. 68 of these projects had reported publicly-available outputs.

Datasets

During the period December 2011- March 2022, 25 unique datasets were used by the projects identified as working on the theme of education. These include education-specific datasets, such as the [National Pupil Database](#) (NPD), as well as economic and business surveys such as the ONS [Annual Business Survey](#) (ABS).

The SRS provides access to data owned by ONS and is also an Accredited Processor for data owned by other government departments and organisations. The [Five Safes Framework](#) ensures restricted access to unpublished data by accredited and approved researchers for research and statistical purposes. This is provided under appropriate legal gateways that ensure data are used ethically and responsibly (Appendix A).

Datasets accessed in the SRS for education research, their data owner and legal gateway:

Dataset	Dataset description	Data Owner	Legal Gateway
<u>Annual Business Survey UK (ABS)</u> 2008 - 2020	Annual survey of businesses covering production, construction, distribution, and service industries.	Office for National Statistics	Digital Economy Act
<u>Annual Population Survey UK (APS)</u> 2004 - 2022	A combined survey of households in the UK providing information on social and socioeconomic variables.	Office for National Statistics	Digital Economy Act
<u>Annual Respondents Database 2 UK (ARD2)</u> 1973 - 2009	Holds responses to the Annual Business Inquiry, a survey covering turnover, costs, employment, industry, and investment.	Office for National Statistics	Digital Economy Act
<u>Annual Respondents Database X UK (ARDx)</u> 1998 - 2014	A dataset covering the years 1998 onwards of Annual Business Inquiry and the Annual Business Survey.	Office for National Statistics	Digital Economy Act
<u>Annual Survey of Hours and Earnings UK (ASHE)</u> 1997 - 2022	Provides information about the levels, distribution and make-up of earnings and hours paid for employees.	Office for National Statistics	Digital Economy Act
<u>Business Enterprise Research & Development Great Britain (BERD)</u> 1995 - 2020	Provides estimates of business' expenditure and employment relating to research and development performed in the UK.	Office for National Statistics	Digital Economy Act
<u>Business Structure Database UK (BSD)</u> 1997 - 2021	Provides a version of the Inter Department Business Register and ONS business survey data.	Office for National Statistics	Digital Economy Act
Census 2011 Household Individual Secure	A 10-year survey that provides a detailed snapshot of the population and its characteristics.	Office for National Statistics	Digital Economy Act
<u>Crime Survey for England and Wales (CSEW)</u> 1981 - 2020	Holds responses from residents about experiences of a selected range of offences in the 12 months prior to the interview.	Office for National Statistics	Digital Economy Act
<u>Growing Up in England Wave 1 (GUIE)</u> 2001 - 2015	A linked dataset of 2011 Census records to the Feasibility All Education Dataset for England (AEDE), linked National Pupil Database (NPD), Individualised Learner Records (ILR) and Further Education (FE) data. Includes data from all local authority-maintained schools in England.	Office for National Statistics and Department for Education	Education Act, Education and Skills Act, Childrens Act, Statistics and Registration Service Act
<u>Labour Force Survey UK (LFS) Household</u> 2002 -2022 <u>Longitudinal Person</u> 2002 - 2022 1992 - 2022	The largest regular household survey in the country, providing official measures on employment and unemployment.	Office for National Statistics	Digital Economy Act
<u>Longitudinal Study England and Wales (LS)</u> 1971 - 2017	The largest data resource in England and Wales with records on more than 500,000 people.	Office for National Statistics	Digital Economy Act
<u>National Pupil Database (NPD)</u>	Provides a near complete picture of school trajectories and outcomes for state school pupils in England.	Department for Education	Education Act

	Bespoke NPD extracts can be linked to other DfE data such as Individualised Learner Records (ILR).		
<u>Opinions and Lifestyle Survey Great Britain (OPN)</u> 2018 - 2022	Provides personal data from 1 adult from a sampled private household, including their family, address, household, income, education, and opinions on a variety of subjects.	Office for National Statistics	Digital Economy Act
<u>Small Business Survey</u> 2010 - 2012	An annual survey of UK small and medium-sized enterprises to measure their experiences, now replaced by the annual Longitudinal Small Business Survey.	Office for National Statistics	Digital Economy Act
<u>Workplace Employment Relations Survey Great Britain (WERS)</u> 1998 - 2011	Provides large-scale statistically reliable evidence on employment relations and practices in Britain.	Department of Business, Energy, and Industrial Strategy	Digital Economy Act

Across the 140 education projects, many used more than one dataset. However, the five datasets with the highest frequency of use were: NPD in 112 projects, LFS Household in 11, ASHE in 11, APS in 9, and LFS Person in 7.

Dataset Frequency in 140 Education Projects

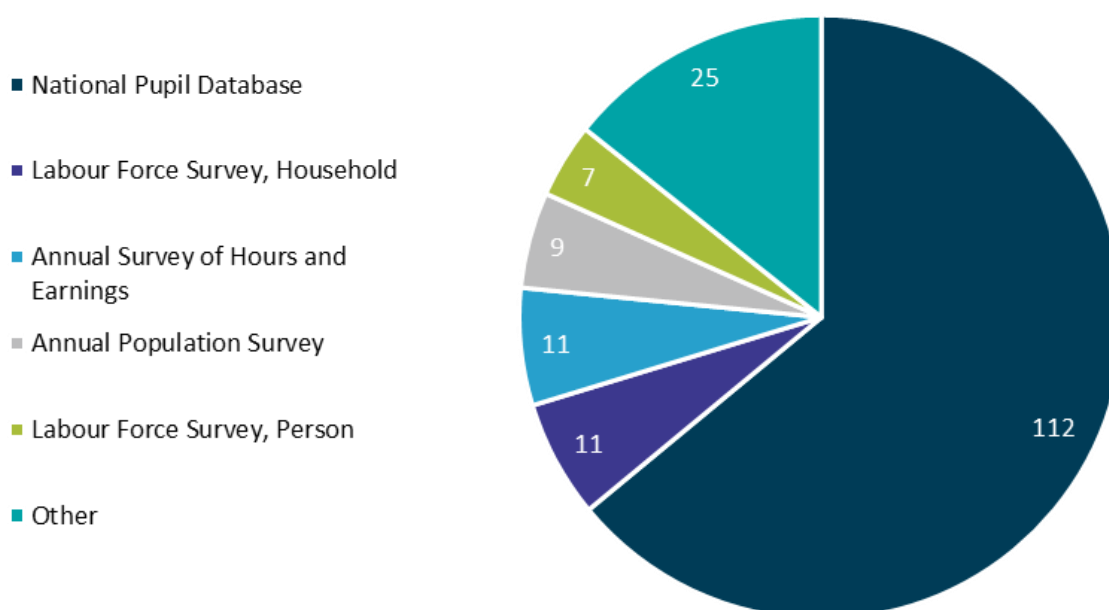


Figure 2. Datasets in the SRS by frequency of use in education research projects.

Projects

Of the 140 completed education-themed SRS projects, 68 had reported publicly available outputs, such as peer-reviewed publications and reports available on organisational websites.

Research themes

Researchers applying to use the SRS through the Digital Economy Act (DEA) select a primary research theme from a list provided by the UK Statistics Authority. For those applying through different legal gateways, the most appropriate DEA theme was assigned. Across the 140 projects, four main themes emerged:

- Education (124 projects)
- Employment (4 projects)
- Health (4 projects)
- Economy (2 projects)
- Other (business, crime, personal finances, population) (6 projects).

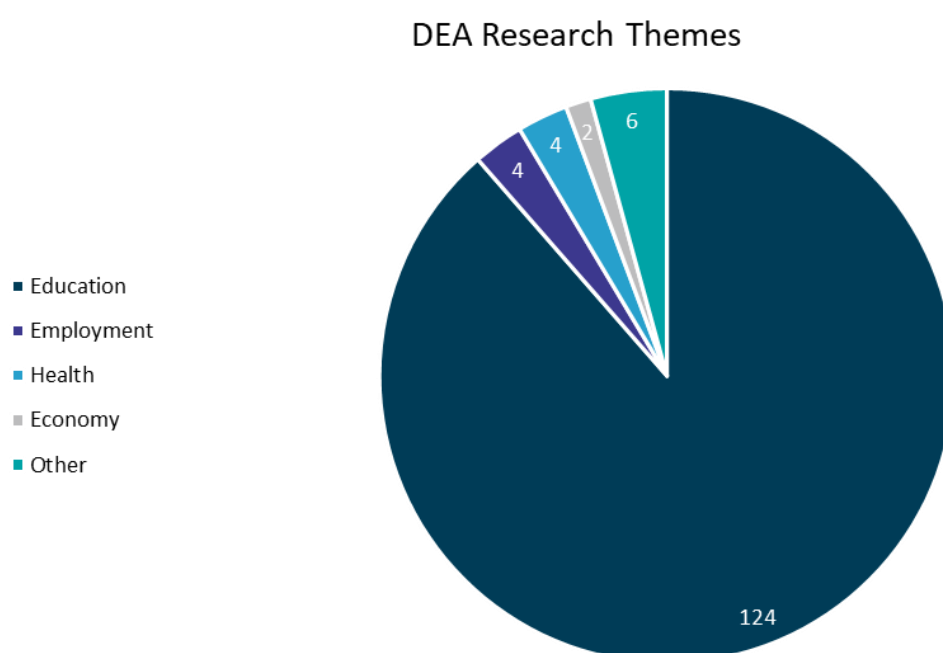


Figure 3. Number of projects in the SRS by Digital Economy Act research theme.

Subthemes

To better understand the areas of research interest within the broader theme of education, projects were categorised into ten subthemes. These were identified through an iterative process of reviewing the project abstracts:

- Early Years
 - 3 – 4-year-olds
- Primary
 - Nursery, Key Stage 1 and Key Stage 2
- Secondary
 - Key Stage 3 and Key Stage 4
- Further Education
 - A-level or equivalent

- Higher Education
 - Undergraduate (or equivalent) and postgraduate
- Social Mobility
- Crime and Violence
- Inequality
- Health
- Other.

Education and Young People Research Subthemes (140)



Figure 4. Number of projects in the SRS by research subtheme.

Of the 140 projects, 17% investigated various aspects of inequality in educational provision and outcomes, many of which were evaluation projects. Inequalities included demographic variables such as ethnicity, disability, gender, and social background.

12% of projects researched issues in primary education, and another 12% focused on secondary education. Early years made up 10% of the projects, further education 9%, and higher education 6%. Health-related projects made up almost 9%, and unsurprisingly, a third of these focused on COVID-19 and the effects of the pandemic on education.

In the 'Other' category, projects focused on a specific subject, multiple key stages, school staff, and school performance.

Methodologies

Just over half (55%) of the projects either involved evaluation or randomised control trials (RCT). Evaluation and RCT-based projects often reviewed education policies or intervention programmes. There was a notable focus on primary school policies,

programmes, and interventions, with 23% of evaluation/RCT projects having a subtheme of either primary or KS2.

This pattern of evaluation research aligns with the UK Government's broader [areas of research interest](#) with a focus on levelling up.

Researchers and organisations

The 140 projects comprised 267 researchers from 78 different organisations across all four sectors (academic, private, public, and third sector/voluntary). Eight projects involved collaborations of researchers from across the sectors, while some researchers also worked on multiple projects. Therefore, the below figure counts 165 projects to include this.

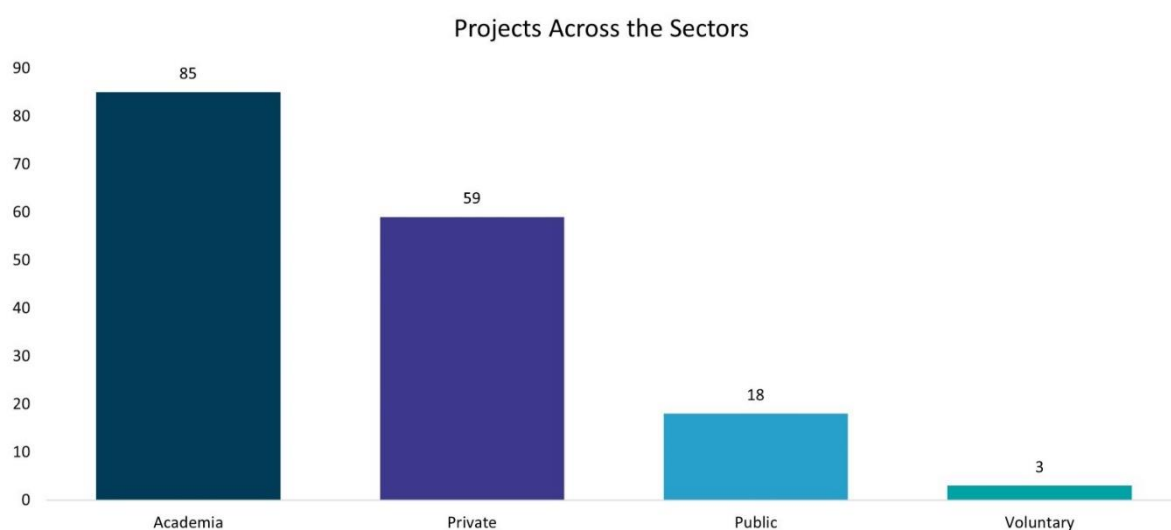


Figure 5. Number of projects in the SRS by sector.

There were five prominent organisations working on multiple projects using education data in the SRS:

- University College London (UCL)
- Fischer Family Trust Education Datalab Ltd
- National Foundation for Educational Research
- The University of Manchester
- Education Policy Institute.

Just over one third (33%) of the projects were led by these five organisations, with 59% being evaluation research or randomised controlled trials of policies and interventions.

Educational research case studies: evaluation projects

This section takes a deeper look into some of the subthemes and evaluation research identified above. The following case studies focus on primary or Key Stage 2 education and projects investigating aspects of inequality.

Case study 1: Evaluation of alternative provision

About the Fischer Family Trust Education Datalab

Fischer Family Trust (FFT) Education Datalab is a non-profit organisation with aims to help pupils achieve their full potential and improve schools using data and research. Their projects range from programme and policy evaluations to subject specific research to child development and welfare.



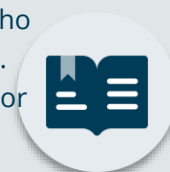
FFT Education Datalab's project 'Developing better-informed policy to support children who experience alternative provision or permanent exclusion' was commissioned by the [Centre for Social Justice](#) to fill the evidence gaps uncovered in their '[Alternative provision coldspots](#)' report. It was funded by [Porticus UK](#) and informed the [IntegratED 2021 Annual Report](#).

This research led to several reports between 2020 and 2021 focusing on improving policy around alternative provision schools:

- [Quantifying the extent pupils access alternative provision](#)
- [Using data in assessing the quality of alternative provision schools](#)
- [Returning to state schools following permanent exclusion or alternative provision](#)
- [The overlap between social care, special educational needs and alternative provision](#)
- [Post-16 destinations for young people who experienced alternative provision](#).

What is alternative provision?

Alternative provision is education arranged by local authorities for pupils who would not otherwise receive suitable education such as mainstream school. This could be because of exclusion, illness, pregnancy, lack of school place, or a short-term intervention to improve behaviour.



Quantifying the extent pupils access alternative provision

By combining [National Pupil Datasets \(NPD\)](#) and [Individualised Learner Record \(ILR\)](#) data, researchers found that 22,000 (3%) pupils in the cohort born in 2002/2003 experienced state-funded alternative provision schools by the age of 16. This increased

to 4% when including other provision commissioned by local authorities. Findings suggest the older the individual the more likely they are to be permanently excluded or placed in state-funded alternative provision.

Using data in assessing the quality of alternative provision schools

Alternative provision quality was measured by pupil attainment and attendance. Attainment was measured by *Attainment5*, an indicator created by FFT Education Datalab which took five of the highest scoring qualifications (GCSE equivalent) of each pupil. Two of the five qualifications were English and Mathematics, while the remaining three were other GCSE equivalent subjects. Researchers found:

- Average Attainment5 score for all pupils in alternative provision aged 11-15 was 12.4, equating to the average of a grade 2 at GCSE.
- Attainment5 scores for state-funded alternative provision pupils were lower than those in state-funded mainstream or special schools with similar KS2 attainments.
- There were differences in attainment between pupils finishing compulsory schooling in state-funded alternative provision with those finishing in mainstream schools. However, the differences may be affected by the extent pupils are re-integrated into mainstream.

In terms of absences, researchers found:

- Absence rates in alternative provision notably increased from 36% in 2016/17 to 38% in 2018/19.
- Older pupils, those most disadvantaged, and those classified as in need, are most likely to be absent.

These findings provided a clearer idea on how to make fairer comparisons of attainment and absence outcomes for alternative provision schools, taking into consideration the differences in pupil populations.

Returning to state schools following permanent exclusion or alternative provision

Several characteristics and experiences were identified as primary determinants for returning to mainstream or special schools after spending time in the state-funded alternative provision sector:

- Age
- Previous history of exclusions
- Ethnic background
- Children looked after or in need.

Age was the most influential factor; the likelihood of being permanently excluded or placed at a state-funded alternative provision school increased with age. However, the

younger the pupil is when they are permanently excluded or placed in alternative provision, the more likely they are to return to mainstream or special schools.

Children looked after and children in need are less likely to return to mainstream or special schools. This was still the case after controlling for other demographic characteristics and school history.

The overlap between social care, special educational needs, and alternative provision

Most young people that experience state-funded alternative provision during their school career are identified as having special educational needs (SEN). Outcomes for these pupils tend to be poor and researchers discovered that [budget cuts for SEN, children's social care](#) and allied services such as [child and adolescent mental health services \(CAMHS\)](#) may have disproportionately affected pupils in state-funded alternative provision.

Number of pupils (thousands) accessing alternative provision, referred for a Children in Need (CIN) assessment and identified as having Special Educational Needs (SEN) up to age 16 (cohort born 2002/03)

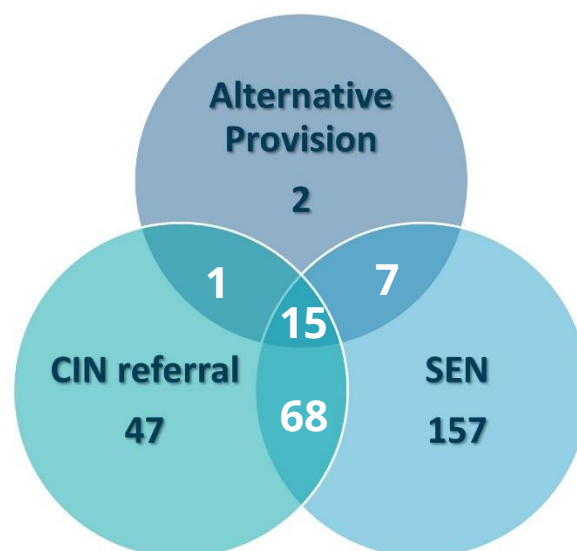


Figure 6. Number of pupils accessing alternative provision, Children in Need assessments, and/or having Special Educational Needs. For the cohort born 2002/2003 there were; 2,000 AP pupils, 157,000 pupils with SEN, 47,000 CIN, 1,000 CIN were in AP, 7,000 SEN pupils were in AP, 68,000 CIN have SEN and 15,000 pupils in AP have SEN and have been referred for a CIN assessment.

Researchers suggest that collaboration between these services is essential to improve the outcomes of young people experiencing alternative provision. Further research is being done to investigate the long-term outcomes, such as employment and earnings, to further understand and improve circumstances for future cohorts.

Post-16 destinations for young people who experienced alternative provision

Very few alternative provision schools have sixth forms, meaning that after Key Stage 4 (KS4) alternative provision pupils transfer to other schools or, more usually colleges.

Using data from [School Census](#), ILR and [National Client Caseload Information System \(NCCIS\)](#) researchers found:

- Less than 40% of pupils who completed KS4 in alternative provision stay in education and training.
- Slightly over 50% of alternative provision pupils that returned to mainstream or special schools for KS4 remain in education and training.
- There was a significant drop off in the first academic year after KS4:
 - 57% of pupils in AP pre-16 were in education in the autumn term, dropping to 36% by the summer term.
 - The equivalent figures for pupils who did not experience alternative provision are 94% for the autumn term and 82% for the summer term.
- Those with higher levels of attainment at KS4 are more likely to remain in education.

Researchers recommended work with colleges and work-based learning providers to solve two issues:

- Initial transition – ensure there are suitable pathways for all.
- Drop out – support pupils on those courses and provide alternative options if necessary.

Findings from each report were discussed with the alternative provision team in the [Department for Education](#) and many of the proposals were included in a green paper on [special educational needs and disabilities \(SEND\)](#). The SEND review was in response to the widespread recognition that the system is failing to deliver for children, young people, and their families. During the review process it became clear that alternative provision is increasingly being used to supplement the SEND system.

What is a green paper?

Green papers are consultation documents produced by the Government. The aim is to allow those inside and outside Parliament to give the department feedback on its policy or legislative proposals.



Impact summary

This evaluation work undertaken demonstrates the value of using administrative data to measure the impact and success of education programmes, schemes, and policy, especially looking at those young people who fall outside of the 'mainstream' system.

This research has extended beyond March 2022, now incorporating data from Longitudinal Education Outcomes to look at [Long-term outcomes of pupils who experience alternative provision](#). Related projects by the FFT Education Datalab include:

- [Secondary school accountability in England](#) with the University of Bristol and University College London, Institute of Education
- [Support work relating to the educational attainment and progress of pupils, with specific focus on disadvantaged pupils](#), which provided evidence to the [Northern Powerhouse Partnership \(NPP\)](#).

Case study 2: Evaluation of educational interventions to improve skills

The National Foundation for Educational Research (NFER) undertook projects in the SRS that evaluated interventions focused on skills improvement around literacy, numeracy, and communication.

About the National Foundation for Educational Research

The National Foundation for Educational Research (NFER) is an independent, not-for-profit organisation aiming to produce high-quality research and insights to inform decision makers about issues across the education system.

They are a trusted and respected voice in education, researching a range of areas, such as accountability, classroom practice, social mobility, and school workforce.



Evaluation of philosophy for children: An effectiveness trial

This effectiveness [Randomised Controlled Trial](#) was a Key Stage 2 (KS2) programme evaluation commissioned by the [Education Endowment Foundation \(EEF\)](#) with a programme grant of £1,214,000. It evaluated the impact of [Philosophy for Children \(P4C\)](#) on Year 6 (aged 10–11) pupils' reading, maths, and social and communication skills, with the main focus on pupils eligible for Free School Meals.

What is Philosophy for Children?

Philosophy for Children (P4C) is an approach to teaching and learning that aims to enhance thinking and communication skills, boost confidence, self-esteem and improve behaviour. P4C encourages teachers and pupils to think in a caring, collaborative, creative and critical way, enabling children to take part in philosophical enquiry.



The trial involved 3,601 pupils across 198 schools. 75 schools in the trial received P4C intervention from September 2017 to July 2019, whilst the other 123 schools comprised the control group.

Over two years, 72 of the 75 intervention schools took part in [The Society for the Advancement of Philosophical Enquiry and Reflection in Education \(SAPERE\)](#) training and support programme [Going for Gold](#) to varying degrees to embed whole-school P4C. Going for Gold cost an average of £13.50 per pupil a year for the average primary school with 282 pupils.

Researchers explored participants' views and experiences through staff and pupil surveys. They also accessed primary and secondary school attainment outcomes using data from the National Pupil Database. The findings were:

- P4C did not make a difference to children's attainment
 - Children in Year 6 in schools taking part in P4C did similarly well in terms of attainment as children in Year 6 in control schools.
- The pupil surveys showed no impact on children's social and communication skills
 - Compared with pupils in control schools, their self-reported social and communication skills were similar.
- Teachers' responses in the staff survey were very positive of the programme
 - They noticed improvements to their pupils' ability to express their opinions and respect for others.
- Teachers and pupils found P4C enjoyable and engaging, and felt it was particularly beneficial for English as an additional language pupils and Special Education Needs (SEN) pupils.

Overall, the trial found no impact of the programme on attainment outcomes, however researchers suggested there could be benefit in evaluating the effects of P4C on non-cognitive outcomes. The EEF has no plans for further trials of P4C as there were no negative effects on pupil outcomes. Schools wishing to implement P4C, for reasons other than academic attainment, should therefore not be discouraged.

International early learning and child wellbeing study (IELS): national report for England

The Department for Education commissioned NFER to contextualise the findings of the ['Early learning and child well-being in England'](#) by linking the data with the National Pupil Database and reporting on national questions and an additional measure of physical development.

The original study by the [Organisation for Economic Cooperation and Development \(OECD\)](#) assessed 5-year-olds' cognitive and social development skills and how these relate to their early learning at home and education. Three OECD countries participated:

England, Estonia, and the United States. In England fieldwork was conducted from October to December 2018, with a sample of 2,577 children from 191 schools.

The NFER report found:

- The development of 5-year-olds in England differed from Estonia and the United States in two measures
 - Emergent numeracy - children in England showed stronger development
 - Inhibition - children in England showed lower development.
- Girls showed greater development than boys in emergent literacy, social-emotional and physical development
- Boys showed greater development in inhibition
- There was no difference between boys and girls for emergent numeracy
- Children with an identified Special Educational Need had lower average scores in all measures, except trust
- Low birthweight was associated with lower physical and cognitive development, but not social-emotional development
- Children eligible for free school meals showed lower development than their peers in all measures except for inhibition.

These findings were circulated widely within the Department for Education, helping ministers with decision making. The department committed to further involvement with IELS in 2024. NFER produced a [Summary Report](#) in December 2020, and a [Participant Summary](#) in January 2021.

Impact summary

The projects highlighted how research using education data can be used to track aspects of development and educational attainment. Other SRS projects undertaken by NFER include:

- [‘Investigating the changing landscape of pupil disadvantage’](#) used National Pupil Database data and received national, sector and broadcast media attention. Findings were used in parliamentary questions to the Secretary of State for Education and presented to policymakers, policy experts and academics
- [‘IELS thematic report: Young children’s development and deprivation in England’](#) identified how different measures of socio-economic deprivation and school deprivation are related to early learning outcomes at age 5. It also identified the protective and risk factors in relation to learning outcomes at age 5, and whether these are different for children from more deprived backgrounds
- [‘How do schools and colleges contribute to a young person’s labour market outcomes?’](#), funded by [Edge Foundation](#), investigated the potentials of the Department for Education’s [Longitudinal Education Outcomes \(LEO\)](#) dataset.

Case study 3: Inequalities in educational attainment

Work undertaken by the Education Policy Institute (EPI) in the SRS focused on identifying inequalities in educational attainment as a result of disruption caused by the Covid-19 pandemic.

About the Education Policy Institute

The Education Policy Institute (EPI) is an independent, impartial, evidence-based research institute which aims to shed light on whether current policy is delivering a high quality and equitable education system.

Their research spans from early years through to the labour market, with core research on: school performance, admissions and capacity, early years development, social mobility, and vulnerable learners.



Education in England: Annual Report 2020

This project in partnership with the [Fair Education Alliance \(FEA\)](#) and [Unbound Philanthropy](#) used National Pupil Database data from 2011 to 2019 to explore education in England, including the attainment gap between disadvantaged pupils and their peers.

Researchers found that before Covid-19, the attainment gap between disadvantaged pupils and their peers stopped closing for the first time in a decade, impacting the education system:

- Disadvantaged pupils in England were 18.1 months behind their peers by the time they finish their GCSEs, the same gap since 2015
- The gap at primary school increased for the first time since 2007
- This may signal to potential widening in the future.

Children with a high persistence of poverty (those on free school meals for over 80% of their time at school) had a learning gap of 22.7 months. This is twice that of children on free school meals for less than 20% of their time at school (11.3 months). Since 2017, the proportion of pupils with a high persistence of poverty rose from 34.8% to 36.7%. This suggests it is an important contributor to the lack of progress with the gap overall.

Attainment varied significantly among pupil ethnic groups:

- Gypsy/Roma pupils were almost three years (34 months) behind White British pupils at GCSE level
- Chinese pupils were two whole years (23.9 months) ahead of White British pupils at GCSE level
- Black Caribbean pupils were 6.5 months behind White British pupils in 2011, but the gap regressed to 10.9 months

- Gaps have also widened for those with English as an additional language who arrived late to the school system.

For the first time, researchers measured disadvantage gap trends for children in the care system (looked-after children) and children in need. These pupils were significantly educationally disadvantaged. Looked after children were nearly two and a half years (29.0 months) behind their peers by the end of their GCSEs. The gap had only reduced by one month (3.3%) since 2014.

Progress in reducing gaps for pupils with Special Educational Needs and Disabilities (SEND) has begun to slow since 2015. Pupils with SEND who have an Education, Health and Care Plan (EHCP) (typically those with greater needs) were well over three years (41.1 months) behind their peers at the end of secondary school, while those with SEND without an EHCP are two full years (24.4 months) behind.

The findings of this research were referenced in the [Commission on Race and Ethnic Disparities](#) independent report on [Education and Training](#). The Commission acknowledged that the current funding system cannot address this challenge or sufficiently deliver the levelling up agenda set out by the Government. The analysis highlights the need for new policy levers to close the disadvantage gap and the necessity of an additional, targeted funding allocation to best support disadvantaged pupils.

Researchers have since produced [additional reports](#) that examine the disadvantage gap at Key Stage 4 and Key Stage 5 during the pandemic.

Understanding progress in the 2020/21 academic year

Education Policy Institute and [Renaissance Learning](#) carried out a study for the Department for Education to assess the impact on pupil attainment after more than 18 months of pandemic disruption to education. It explored the extent of pandemic learning loss and recovery in primary and secondary schools at a national and regional level in England during the first half of the autumn term (2021/2022). The analysis considers how many months of learning pupils were behind following the pandemic, compared to a typical, pre-pandemic school year.

The study was based on assessment data from Renaissance Learning's Star Reading and Star Maths that identify gaps in learning. These [Star Assessments](#) adapt to the individual and provide a standardised score. The researchers linked this data to National Pupil Database data, enabling analysis by pupil characteristics, and translated changes in average scores to months of lost learning.

The key findings included:

- National primary reading: Primary school pupils were on average 0.8 months behind in reading, compared to where they would be in a typical, pre-pandemic year

- National primary maths: Primary school pupils were on average 1.9 months behind in maths. Pupils had recovered 0.4 months since the summer term
- National secondary reading: Secondary school pupils were on average 2.4 months behind in reading. Learning losses had increased by 0.5 months since the summer term
- Pupils from disadvantaged backgrounds primary maths: Disadvantaged primary school pupils were on average 2.2 months behind in maths in the autumn term
- Pupils from disadvantaged backgrounds secondary reading: Disadvantaged secondary school pupils were on average 3.5 months behind in reading in the autumn term, compared to 2.0 months for non-disadvantaged pupils – a substantial gap of 1.5 months. This difference in lost learning between disadvantaged and non-disadvantaged pupils has widened since the summer term.

The report received wide media coverage, with articles from the BBC, the Guardian, Evening Standard, and the Independent. The report was also referenced in two parliamentary Q&As and debates.

What is a white paper?

White papers are policy documents produced by the Government setting out their proposals for future legislation. They may include a draft version of a planned Bill for further consultation and discussion, allowing final changes to be made before being formally presented to Parliament.



Impact summary

The research by the Education Policy Institute (EPI) in the SRS used demographic variables to look at educational inequalities, highlighting the increased negative impact of the pandemic on the most disadvantaged young people.

Other SRS projects undertaken by the EPI include:

- **[‘The relationship between the Kumon maths programme and Key Stage 2 maths outcomes in England’](#)**, which linked NPD data with anonymous **[Kumon](#)** data detailing the cohort completing their national curriculum assessments in 2019
- **[‘Evidence review: The effects of high-quality professional development on teachers and students’](#)** and **[‘Divergent Pathways: the disadvantage gap, accountability and the pupil premium’](#)** were referenced in the Department for Education’s 2022 white paper **[‘Opportunity for all: strong schools with great teachers for your child’](#)**.

Case study 4: Evaluating the 'Achievement for All' programme

Researchers from the Manchester Institute of Education at the University of Manchester were commissioned by the [Education Endowment Foundation \(EEF\)](#) to conduct an evaluation of the Achievement for All (AFA) programme.

About the Manchester Institute of Education

The Manchester Institute of Education (MIE) is a department at the University of Manchester, a Russell Group university respected around the world as a centre of teaching excellence and innovative research.

The MIE is home to one of the largest educational research communities and ranks in the UK top ten for education.



This project followed up a positive pilot trial of the AFA programme with a more robust evaluation. The team undertook a Randomised Controlled Trial using National Pupil Database data in the SRS to answer four research questions guiding the evaluation:

1. Compared to usual practice, what was the impact of the AFA schools programme on children's literacy, maths, attendance, and resilience measures?
2. Were there differential intervention benefits in the outcomes among children eligible for free school meals or among the target group of children identified by the participating schools as belonging to 'the lowest achieving 20%'?
3. How was AFA implemented and what difference does it make?
4. Was there any evidence to support the AFA theory of change?

About the Education Endowment Foundation

The Education Endowment Foundation (EEF) was founded in 2011 by the Sutton Trust. It is an independent grant-making charity dedicated to raise attainment of children facing socio-economic disadvantage.



The project took four years beginning in 2016 and the findings were published in two reports in 2020 and 2021:

- [Achievement for All: Evaluation Report, May 2020](#)
- [Achievement for All: Addendum Report, April 2021](#).

What is Achievement for All?

Achievement for All (AFA) was a whole-school improvement programme focused on KS2 aiming to improve the academic and social outcomes of primary school pupils. The programme was funded by the EEF with a grant of £919,000.

Trained AFA coaches would deliver bespoke two-year programmes to schools through monthly coaching sessions, focusing on leadership, learning, parental engagement, and wider outcomes, in addition to focusing on improving outcomes for a target group of children.



Overall, this project demonstrated that AFA was not achieving its aims. Instead, pupils who received intervention from AFA made significantly less progress than those attending schools that continued as usual. The evaluation conclusions were:

- On average, children in AFA schools made two months' less progress in reading than children not receiving the programme
 - This was reflected in the target group (the lowest achieving 20%) and children eligible for free school meals, compared to their respective groups in schools not receiving the programme.
- All children and those eligible for free school meals in AFA made two months' less progress in maths, while the target group made three months' less progress than those in their respective groups in schools that did not receive the programme
- The programme did not improve children's self-esteem, goals and aspirations, perceptions of how supportive their families were, or the attendance of the target group
 - However, children in an AFA school were more likely to report that there was an adult in their school who supported them.
- Implementation of AFA was not optimal or varied across schools. However, there was no evidence to suggest this contributed to the negative findings.

As a result of this project the EEF decided not to provide funding for this scheme, and discontinued a grant of £885,000 for a [similar programme focusing on early years](#).

Impact summary

This project demonstrates the value of evaluation for assessing Key Stage 2 provision. Results can help ensure that funding and grants are directed towards the most beneficial programmes with maximum impact.

Summary

This thematic overview of research on education using data available in the SRS can help answer a broad range of questions. The questions covered different levels of educational provision in the UK, with a notable interest in outcomes, inequality, and levelling-up. Many projects evaluated a policy, programme, or an intervention, especially those affecting primary or Key Stage 2 education. The span of research undertaken suggests a motivation to improve educational outcomes for children and young people, especially those who may not be gaining maximum benefit from the mainstream system.

By identifying published outputs and tangible outcomes from research projects, this synthesis report highlights the importance of quantitative work to inform policy and redirect funding to areas that can make a difference.

Since March 2022, education projects using newer educational datasets like [Longitudinal Education Outcomes \(LEO\)](#) and [Growing Up in England \(GUIE\)](#) have publicly available outputs and impact to include in future thematic overviews. These datasets offer fantastic opportunities to further enrich the capability of research on education and young people.

About the ONS Secure Research Service and partners

Secure Research Service

The [ONS Secure Research Service \(SRS\)](#) gives accredited and approved researchers secure access to de-identified, unpublished data to work on research for the public good predominantly under the Digital Economy Act 2017 (DEA).

To access SRS data via the DEA, all research projects undergo a screening process where public benefit should drive the research outcomes and potential impact must be demonstrated. All researchers must demonstrate that their project meets at least one of seven defined intended public benefits to the UK economy or society.



Integrated Data Service

The [Integrated Data Service \(IDS\)](#) is a cross-government service, for which the Office for National Statistics is the lead delivery partner. The service securely enables co-ordinated access to a range of high-quality data – critical to informing policy decisions and improving public services.

Rapid advances in technology have opened the door for developments in the way our users access data. The IDS will utilise updated cloud-based infrastructure to offer

enhanced processing power and will streamline access arrangements. Plans are underway to transition data, users, and their projects from the SRS to the IDS.



Department for Education

The Department for Education (DfE) and its executive agencies have legal powers to collect data about individuals in the children's services, education, apprenticeships, and wider skills training sectors, in England. This data forms a significant part of the department's evidence base.

DfE shares controlled data where there are clear benefits to the education or children's services sector, and where it encourages the research community to work collaboratively with the department to build the evidence base. Data protection legislation and the Five Safes Framework are used to ensure that safe people access our safe data for safe projects in safe settings to produce safe outputs.



Department
for Education

Administrative Data Research UK

Administrative Data Research UK (ADR UK) is a partnership transforming the way researchers access the UK's wealth of public sector data, to enable better informed policy decisions that improve lives. Over the past four years, ADR UK has made significant advances in making de-identified administrative data easier for researchers to access securely, and there is now an impressive collection of [new flagship datasets](#) available through our trusted research environments across the UK.



Appendix

Appendix A – Legal Gateways

Data in the SRS is made available under a range of legal gateways. The ONS acts as a processor for the data. Secure education data is made available under the following legal gateways:

Statistics and Registration Service Act, 2007

Prior to 2020, the SRS most commonly used the **Statistics and Registration Service Act (SRSA) 2007**. This Act states the responsibility to promote and safeguard the production and publication of official statistics that serve the public good.

Digital Economy Act, 2017

Since 2020 the most used legal gateway for SRS data is the Digital Economy Act 2017. **Part 5 of the Digital Economy Act 2017** introduced powers to share information to help make the digital delivery of government services more efficient and effective. Public authorities need to have robust safeguards in place to ensure that information is processed in a secure and appropriate way in line with the requirements of data protection legislation.

The SRS is accredited as a Digital Economy Act (DEA) 2017 processor by the UK Statistics Authority (UKSA) for the provision of data for research purposes. Some education data is made available under the DEA.

Department for Education – Education Act

The Department for Education (DfE) and its executive agencies have legal powers to collect data about individuals in the children's services, education, apprenticeships, and wider skills training sectors in England.

DfE and its executive agencies ensure that any projects permitted to use their data are fully compliant with data protection legislation. DfE will only share data if they have lawful basis for the data share. More information on this can be found [here](#).