Exclusion, Reintegration and Their Consequences for Pupils in England: Peer Effects, Timing and Policy Trade-offs

Main Public Output

Veruska Oppedisano

With: Richard Dorsett, Dave Thomson, Min Zhang

June 2026

Acknowledgments

We thank members of our advisory group for their time and expert advice on the research as it evolved: Sandra McNally (University of Surrey and CEP, LSE), Alex Sutherland (University of Oxford), Matteo Sandi (Catholic University of Milan), Kiran Gill, Kit Rooney and Rebecca Reid (The Difference), Joe Lane (Office of the Children's Commissioner); David Amos and Charles Livesey (DfE); Sarah Cull (National Association of Schoolmasters Union of Women Teachers).

We are grateful to the Nuffield Foundation for funding this research. Our particular thanks go to Ruth Maisey for her guidance and support throughout.

The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds and undertakes rigorous research, encourages innovation and supports the use of sound evidence to inform social and economic policy, and improve people's lives. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics, the Ada Lovelace Institute and the Nuffield Family Justice Observatory. This project has been funded by the Nuffield Foundation, but the views expressed are those of the authors and not necessarily the Foundation. Find out more at: nuffieldfoundation.org.
Bluesky: @nuffieldfoundation.org
LinkedIn: Nuffield Foundation

This work was produced using statistical data from ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates. We thank the Department for Education for providing access to the NPD and LEO data.

This project brought together teams from two institutions to undertake a programme of research into the spillover effects of exclusions and re-integration. This comprised:

- Veruska Oppedisano (University of Westminster)
- Richard Dorsett (University of Westminster)
- Min Zhang (University of Westminster)
- David Thomson (FFT Education Datalab)

Table of Contents

Executive Summary

School exclusion is one of the most consequential disciplinary tools available to schools in England. While permanent exclusion affects a small minority of pupils each year, its implications extend far beyond those directly removed from school.

This project addresses a central evidence gap:

- What are the effects of exclusion on the classmates who remain?
- Does reintegration of previously excluded pupils harm their new peers?
- How do these effects depend on timing, severity, and pupil characteristics?

Using linked administrative data from the National Pupil Database and Longitudinal Education Outcomes dataset, covering multiple cohorts of pupils in English secondary schools, we provide new causal evidence on both exclusion and reintegration.

The project was motivated by the concern that prior research has focused almost exclusively on the excluded pupil, leaving open the broader system-level consequences of exclusion and re-integration.

Our key findings are:

- Cohorts in which disruption persists and culminates in exclusion, particularly in Year 9, experience worse outcomes in terms of lower GCSE attainment and higher probability of being NEET at age 21.
- Very late exclusions (Year 10) have smaller and more limited effects, primarily on English attainment, Level 2 completion and probability of employment.
- The negative peer effects of exclusion in Year 9 are driven by the severity and persistence of prior disruptive behaviour.
- Pupils who are reintegrated tend to be a more advantaged group than the wider population of excluded pupils.
- Reintegration of previously excluded pupils does not generate negative spillovers for new peers.
- Schools that reintegrate tend to serve more disadvantaged intakes.
- We find no evidence that higher exclusion rates increase teacher turnover once endogeneity is addressed, suggesting that the peer effects we document are not driven by changes in staff retention.

The overall message is nuanced.

Persistent and unresolved disruption imposes real costs on classmates, particularly pupils already at academic risk. However, these effects do not appear to operate through changes in teacher retention. Instead, the evidence points to direct peer exposure to sustained disruption as the primary mechanism. Exclusion itself carries substantial long-run costs for excluded pupils. Crucially, current school approaches to reintegration do not appear to harm peers.

The evidence suggests that the debate should move beyond the binary question of whether exclusion is “good” or “bad”. Persistent disruption imposes significant costs on classmates, while exclusion carries substantial long-run risks for the excluded pupil. The policy challenge is therefore to intervene earlier and more effectively, before disruption becomes entrenched.

This points towards four priorities: strengthening early behavioural, mental health and SEND support; improving monitoring systems to identify escalating disruption at an earlier stage; ensuring that reintegration pathways are adequately supported and equitably shared across schools; and continuing to build the evidence base on the long-term consequences of different exclusion pathways. Together, these approaches offer a route to protecting peer learning while reducing the long-term social and fiscal costs associated with exclusion.

1. Why this project matters

Permanent exclusions are relatively rare, affecting just 0.4 percent of pupils in 2024/25, corresponding to 3,715 pupils (DfE, 2025).

The literature indicates that the costs for the removed pupils are high, and they accumulate over time, leading to lower educational attainment, worsened employment prospects and earlier involvement in the criminal justice system (e.g. McAra and McVie, 2010; Cuellar and Markowitz, 2015; Sanders et al., 2020). In contrast, relatively little is known about the consequences of exclusion for non-excluded peers. Existing research has documented that classrooms with high levels of disruptive behaviour tend to have poorer overall academic outcomes (Carrell and Hoekstra, 2010; Carrell et al., 2018). While some recent studies examine the peer effects of suspension policies (e.g. Bacher-Hicks et al., 2024; Pope and Zuo, 2023), we lack causal evidence on the spillovers generated when disruptive students are removed and, importantly, when in the school career these removals occur. Yet exclusion decisions are rarely evaluated in terms of their system-wide effects. One potential channel through which disruption may affect outcomes is school workforce stability, particularly teacher turnover. However, there is little causal evidence on whether exclusion and disruption translate into changes in staff retention.

Even though exclusion is rare at the individual level, many pupils are indirectly affected. Because secondary schools typically have around 200 pupils per year group, a single exclusion potentially affects an entire cohort. We estimate that approximately half of pupils are likely to experience at least one removal of a disruptive pupil within their cohort.

Despite this, little causal evidence exists for England on:

- Whether excluding disruptive pupils improves outcomes for those who remain.
- Whether reintegration harms new peers.
- How timing shapes peer effects.

This project was designed to fill that gap.

2. Research Questions

The study addresses three core questions:

RQ1. Does excluding pupils affect non-excluded peers' educational and labour market outcomes?
RQ2. Does reintegrating previously excluded pupils affect their new peers' outcomes?

The distinctive contribution of this project is to analyse exclusion and reintegration together, recognising that a permanently excluded pupil must enter another educational setting.

3. Data and Methodology

Data

This study uses the Longitudinal Education Outcomes (LEO) dataset, which links detailed pupil-level education records from the National Pupil Database to administrative labour market data. The linked data allow us to follow cohorts of pupils in English state secondary schools from early schooling through to early adulthood. We observe rich information on pupils' background characteristics, school histories, exclusions and suspensions, attendance, and attainment at Key Stage 4 and Key Stage 5. Crucially, the dataset also enables us to examine longer-term outcomes, including post-16 qualification completion, employment at age 21, and NEET status. The analysis of exclusion focuses on cohorts completing Key Stage 4 between 2014 and 2017, while the reintegration analysis draws on cohorts completing Key Stage 4 between 2011 and 2017.

The scale and administrative nature of LEO provide near-complete population coverage, avoiding issues of survey non-response and recall error, and allowing us to study relatively rare events such as permanent exclusion with sufficient statistical power.

Identifying causal effects

Estimating the impact of exclusion and reintegration on peers is not straightforward because neither process is random. Schools exclude pupils in response to behavioural deterioration, disciplinary policies, and leadership changes. These same factors may also influence the outcomes of the remaining pupils. For reintegration, despite the presence of a Fair Allocation Protocol, re-integration patterns across schools are not independent on school body composition. A simple comparison of cohorts with high and low exclusion or reintegration rates would therefore confound the effect of exclusion and reintegration with the conditions that led to it.

Schools differ in intake and disciplinary approach. Even with rich controls and school fixed effects, unobserved time-varying shocks, such as worsening behaviour or leadership turnover, could bias estimates. To address this, we exploit sources of variation that affect schools' ability to exclude or reintegrate pupils but are external to the academic potential of the peers we study.

RQ1: Instrumenting exclusion using local AP supply shocks

In England, permanently excluded pupils are usually placed in Alternative Provision (AP) settings such as Pupil Referral Units. Schools cannot permanently exclude without access to an AP placement. When local AP capacity is tight, exclusion becomes harder; when capacity loosens, it becomes more feasible. We therefore use year-to-year changes in the number of AP places filled within a 10km radius of each school as an instrument for exclusion rates. Because total AP capacity is relatively fixed in the short run, increases in filled AP places (i.e. tighter capacity) reduce the scope for new placements and therefore limit schools' ability to exclude.

Crucially, this measure is constructed in a leave-one-out manner: we exclude the focal school's own exclusions from the calculation. The instrument therefore captures changes in the broader local placement market, driven by pressures across neighbouring schools, rather than shocks within the school itself.

This approach is credible for three reasons. First, AP settings serve multiple mainstream schools. Year-to-year changes in filled capacity reflect aggregate local dynamics, not the behaviour of one cohort. Second, the non-excluded pupils whose outcomes we analyse remain in mainstream schools. Changes in AP capacity cannot directly affect them except through the school's ability to remove disruptive peers. Third, the instrument is empirically strong and behaves as expected. When local AP filled capacity increases, exclusion rates fall, consistent with binding supply constraints. Additional checks show that the instrument does not predict pre-treatment attainment or unrelated outcomes.

This strategy allows us to compare otherwise similar cohorts within the same school that differ in exposure to exclusion due to external changes in local AP availability. In practice, the instrument shifts exclusion decisions for marginal pupils whose removal depends on the availability of AP places. When local AP capacity is constrained, these pupils remain in mainstream schools; when capacity becomes available, they are excluded. As a result, the estimates capture the effect of exposure to cohorts in which disruption persists and culminates in exclusion, relative to cohorts where disruption does not escalate to that point at the same time. The interpretation is therefore not the effect of exclusion relative to a fixed counterfactual in which the same level of disruption persists without removal, but rather the effect of differences in the trajectory and accumulation of disruptive behaviour that lead to exclusion.

Table 1 shows that increases in locally filled Alternative Provision (AP) capacity significantly reduce exclusion rates. A one-unit increase in filled AP places reduces the availability of AP places for new placements and therefore lowers the number of exclusions. A one-unit rise in filled AP places lowers exclusions by 0.95 pupils per 1,000 in Year 8, 0.42 in Year 9, and 0.42 in Year 10 (all $p < 0.001$). The effects are economically meaningful, particularly in earlier secondary years, and suggest that local AP capacity acts as a binding institutional constraint on schools' exclusion decisions. The instrument is strong, with first-stage F-statistics well above conventional thresholds (ranging from 31.9 to 67.97).

Table 1 – First stage: the effect of change in AP filled spaces on exclusions

VARIABLES	(1) Exclusion per 1k in Y8	(2) Exclusion per 1k in Y9	(3) Exclusion per 1k in Y10
Yearly change AP Y8, 10km	-0.9500***		
	[0.115]		
Yearly change AP Y9, 10km		-0.4236***	
		[0.075]	
Yearly change AP Y10, 10km			-0.4169***
			[0.059]
Constant	1.1681***	1.8031***	2.2283***
	[0.028]	[0.036]	[0.039]
Mean outcome	1.137	1.784	2.189
Observations	2,035,656	2,035,656	2,035,656
F-test	67.97	31.90	49.35
p-value	0.000	0.000	0.000

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. School fixed effect linear regression estimated. Standard errors in brackets clustered at school and cohort level. Controls: KS2 Maths, KS2 English, EAL, FSM (up to 11), Statement or EHC plan (up to

11), SEN (up to 11), Ever looked after up to age 16, Pupil had ever been in need, Female, Unauthorized absence up to 12, Ethnicity dummies, urban dummy, IDACI score decile dummies, year dummies, dummies for missing KS2 and missing unauthorized absences.

RQ2: Identifying the effect of reintegration

Institutionally, reintegration is governed by fair access arrangements, which limit schools' discretion. Empirically, we find that the probability of receiving reintegrated pupils is significantly related to the fraction of children in care and children in need in a school. This indicates that reintegration exposure is not randomly assigned, but instead reflects underlying school characteristics. As a result, simple comparisons of schools with different levels of reintegration exposure may be biased, highlighting the need for a valid instrument that can isolate exogenous variation in reintegration.

We apply a similar logic to reintegration. Under local authority fair access protocols, schools are required to admit permanently excluded pupils, even if they are full. The number of pupils available for reintegration depends on exclusion activity across other schools in the same local area. We therefore use year-to-year changes in exclusion rates in neighbouring schools, again constructed in a leave-one-out manner, as a source of variation in reintegration exposure. By excluding the focal school from the calculation, we ensure that the variation reflects changes in the local supply of excluded pupils rather than the receiving school's own exclusion behaviour. These local supply shocks alter the probability that a school receives reintegrated pupils, but are unlikely to be directly related to the underlying academic trajectory of a specific cohort in the receiving school.

This approach allows us to isolate the causal effect of receiving reintegrated pupils on new peers' educational and labour-market outcomes. Table 2 shows that increases in local exclusion pressure significantly raise reintegration rates. A one-unit increase in the leave-one-out mean number of excluded pupils within a 10km radius is associated with additional 0.752 reintegration per one-thousand pupils in Year 8, 0.574 in Year 9, and 0.589 in Year (all statistically significant).

The estimated coefficients imply sizeable effects relative to baseline reintegration rates. Relative to the mean reintegration rates in the data, these effects correspond to approximately 155% of the baseline rate in Year 8, 64% in Year 9, and 75% in Year 10. Overall, the estimates indicate that marginal increases in exclusions are associated with substantial increases in reintegration flows relative to the average reintegration rates observed in the data.

The findings indicate that local exclusion pressure acts as a binding institutional margin shaping reintegration decisions. The instrument is strong, with first-stage F-statistics between 33 and 51, well above conventional weak-instrument thresholds.

Table 2 – First stage: the effect of change in exclusions on reintegration

VARIABLES	(1) Fraction of Y8 reintegration, per 1K	(2) Fraction of Y9 reintegration, per 1K	(3) Fraction of Y10 reintegration, per 1K
Yearly change excl Y8, 10km	0.752***		
	[0.108]		
Yearly change excl Y9, 10km		0.574***	
		[0.099]	
Yearly change excl Y10, 10km			0.589***
			[0.082]
Mean outcome	0.4868	0.9019	0.7823
Observations	3,785,130	3,785,130	3,785,130
F-test	48.37	33.40	51.07
p-value	0.000	0.000	0.000

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. School fixed effect linear regression estimated. Standard errors in brackets clustered at school and cohort level. Controls: KS2 Maths, KS2 English, EAL, FSM (up to 11), Statement or EHC plan (up to 11), SEN (up to 11), Ever looked after up to age 16, Pupil had ever been in need, Female, Unauthorized absence up to 12, Ethnicity dummies, urban dummy, IDACI score decile dummies, year dummies, dummies for missing KS2 and missing unauthorized absences.

4. The timing of exclusion across year groups

The effects of exclusion differ markedly depending on when they occur in secondary school. Using changes in local Alternative Provision capacity to isolate causal effects, we find that peer outcomes are most negatively affected in environments where exclusion occurs in Year 9.

Results reported in Table 3 show that a one-per-thousand increase in the Year 9 exclusion rate reduces GCSE Mathematics performance by 0.024 standard deviations and English performance by 0.044 standard deviations. The effects are smaller for exclusions in Year 8 and more modest or less precisely estimated for Year 10. This pattern suggests that mid-secondary school is a particularly sensitive period for peer spillovers.

Although a one-per-thousand increase may sound small, in a typical cohort of 200 pupils it represents a marginal increase in exposure to highly disruptive peers across the year. In English secondary schools, where pupils rotate across subjects and interact with many classmates, this exposure is diffuse but repeated. Small changes in exclusion rates can therefore affect a large share of the cohort through cumulative, low-intensity peer interactions. The resulting achievement losses are similar in magnitude to those found in classroom-level peer effects studies once differences in institutional context are taken into account (Carrell and Hoekstra, 2010; Carrell et al., 2018; Lavy et al., 2012; Lavy and Yancu, 2025).

The consequences extend beyond test scores. Higher Year 9 exclusion rates reduce the probability of achieving Level 2 and Level 3 qualifications by 0.65 and 0.63 percentage points and increase the likelihood of being NEET at age 21 by 0.62 percentage points. Exclusions in Year 10 are also associated with lower KS4 English attainment, Level 2 completion and employment outcomes at age 21, though effects are smaller.

Very late exclusions (Year 10) have smaller effects on peers because much of the cumulative disruption has already occurred by this stage. Exclusion therefore comes too late to reverse the damage experienced earlier in secondary school. In other words, the estimated peer effects largely reflect the disruption experienced prior to exclusion rather than the act of exclusion itself.

Table 3 –Two Stage Least Square estimates of exclusions on educational and labour market outcomes

Outcome	Excl Y8	Excl Y9	Excl Y10	Controls, School and cohort FE	N	Mean outcome
KS4 Maths						
Coeff	-0.0100**	-0.0244***	-0.0038	Yes	2,035,656	0.103
[se]	[0.004]	[0.006]	[0.003]			
Kleibergen-Paap Wald F stat	67.97	31.90	49.35			
KS4 English						
Coeff	0.0016	-0.0436***	-0.0150**	Yes	2,035,656	0.130
[se]	[0.004]	[0.010]	[0.005]			
Kleibergen-Paap Wald F stat	67.97	31.9	49.35			
Level 2						
Coeff	-0.0024+	-0.0065**	-0.0028*	Yes	2,035,656	0.831
[se]	[0.001]	[0.002]	[0.001]			
Kleibergen-Paap Wald F stat	31.90	49.35	71.38			
Level 3						
Coeff	0.0011	-0.0063**	-0.0007	Yes	2,035,656	0.621
[se]	[0.002]	[0.002]	[0.001]			
Kleibergen-Paap Wald F stat	67.97	31.90	49.35			
Employed at 21						
Coeff	0.0025	-0.0034	-0.0036*	Yes	1,630,561	0.797
[se]	[0.002]	[0.002]	[0.002]			
Kleibergen-Paap Wald F stat	71.38	30.49	44.40			
NEET at 21						
Coeff	-0.0021	0.0062**	0.0025	Yes	1,630,561	0.171
[se]	[0.001]	[0.002]	[0.002]			
Kleibergen-Paap Wald F stat	71.38	30.49	44.40			

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. School fixed effect linear regression estimated. Each row-column combination is a separate regression. Standard errors in brackets clustered at school and cohort level. Controls: KS2 Maths, KS2 English, EAL, FSM (up to 11), Statement or EHC plan (up to 11), SEN (up to 11), Ever looked after up to age 16, Pupil had ever been in need, Female, Unauthorized absence up to 12, Ethnicity dummies, urban dummy, IDACI score decile dummies, year dummies, dummies for missing KS2 and missing unauthorized absences.

5. Mechanism: What Drives the Peer Effects of Exclusion?

To understand why exclusions affect peers, we examine whether the impact depends on how disruptive the excluded pupils were before they left.

First, we measure disruptiveness using the number of suspension days a pupil accumulated prior to exclusion. Suspension days capture repeated and serious behavioural incidents, and therefore provide a proxy for persistent classroom disruption rather than one-off misconduct. We find that peer effects are substantially stronger when excluded pupils had long histories of suspension. In Year 9, differences in suspension intensity explain roughly 20–25% of the

overall negative spillover effects. At very high levels of prior suspension (around the top 5% of the distribution), removing these pupils can even generate modest positive spillovers for peers.

Second, we look at the recorded reasons for exclusion. The negative peer effects are concentrated among exclusions for persistent disruptive behaviour **and** physical assault, while exclusions for less severe reasons such as verbal abuse produce much weaker and less consistent effects. The strongest and most systematic impacts again appear in Year 9.

Taken together, both pieces of evidence point to the same mechanism: the spillovers we identify are not driven by exclusion per se, but by exposure to classmates with sustained and serious behavioural problems. In other words, it is cumulative disruptive behaviour, repeated incidents that interfere with learning across subjects and over time, that generates the bulk of the peer effects. The instrumental variable strategy therefore captures the consequences of schools where disruptive behaviour persists long enough to culminate in exclusion, compared with otherwise similar cohorts where disruption does not escalate to the point of exclusion at that time.

This interpretation is consistent with the broader pattern of results: peer effects are strongest in the middle years of secondary school, when sustained disruption can meaningfully affect preparation for high-stakes qualifications, and weaker in earlier years or once many of the most disruptive pupils have already left.

6. Who Is Most Affected?

Peer effects are not evenly distributed. The consequences of exclusion differ systematically by pupils' prior attainment, socio-economic background, special educational needs status, and gender, and these differences vary sharply depending on the timing of exclusion.

Year 8: Early Exclusions

When exclusions occur early in secondary school, the pattern is mixed rather than uniformly negative. For pupils eligible for free school meals (FSM), Year 8 exclusions are associated with modest improvements in later labour-market attachment, increasing employment at age 21 by around 2 percentage points and reducing NEET participation by a similar amount. Low-attaining pupils experience comparable gains, with employment rising by around 1.5 percentage points and NEET rates falling by 1.5 percentage points. For SEN pupils there are also reductions in qualification attainment.

One interpretation is that early removal of disruptive peers may stabilise classroom environments in ways that particularly benefit students already oriented toward non-academic pathways, supporting smoother school-to-work transitions.

Female pupils, by contrast, benefit more broadly from Year 8 exclusions. They experience improvements across most outcomes, including educational progression and labour-market attachment, with the exception of mathematics attainment.

Year 9: Mid-Secondary Exclusions

The heterogeneity becomes more sharply defined in Year 9, which is also where the average peer effects are largest.

FSM pupils experience improvements in educational attainment, including a gain of around 0.03 standard deviations in mathematics attainment and increases in Level 2 and Level 3 qualification attainment. However, these gains do not translate into stronger post-school outcomes. Employment at age 21 falls by around 1.6 percentage points, while the probability of being NEET rises by approximately 2.4 percentage points.

This suggests a disconnect between short-run academic improvements and longer-run progression. While classroom conditions may improve sufficiently to raise measured attainment, these improvements do not necessarily translate into sustained labour-market advancement.

Female pupils again show a more consistently positive pattern in Year 9: they benefit in mathematics attainment and face lower NEET risk.

Low-attaining pupils bear the most pronounced costs of Year 9 exclusions. They experience declines of approximately 0.09 standard deviations in both mathematics and English attainment, reductions of around 2 percentage points in Level 2 and Level 3 qualification attainment, a 1.7 percentage point reduction in employment, and a 2.1 percentage point increase in NEET participation. Mid-secondary disruption therefore appears particularly damaging for students with weaker academic foundations, potentially compounding existing disadvantages.

Year 10: Late Exclusions

By Year 10, the pattern shifts again. FSM pupils experience negative effects across most outcomes, including declines of around 0.03 standard deviations in both mathematics and English attainment, a 1.4 percentage point reduction in Level 2 qualification attainment, a 2.5 percentage point reduction in employment at age 21, and a 3-percentage point increase in NEET participation. This suggests that late exclusions may depress both academic performance and labour-market prospects.

Female pupils are also adversely affected in GCSE attainment.

Low-attaining pupils show a distinct pattern. They experience improvements in attainment, including gains of around 0.03 standard deviations in mathematics and 0.02 standard deviations in English, together with a modest increase in Level 3 qualification attainment. However, these gains are accompanied by weaker labour-market outcomes, including a 1.4 percentage point reduction in employment and a 1.5 percentage point increase in NEET participation. One possible interpretation is that late removal of disruptive peers improves classroom conditions at a critical examination stage, raising exam performance enough to shift some marginal pupils over key qualification thresholds. However, these gains do not appear to translate into durable employment advantages.

A Clear Timing Gradient

Taken together, the results reveal a strong timing gradient in the distributional effects of exclusion.

- In **Year 8**, early exclusions tend to improve labour-market attachment for disadvantaged and low-ability pupils.
- In **Year 9**, exclusions are most damaging for low-ability pupils across nearly all margins, while disadvantaged pupils see attainment gains that do not translate into improved long-run trajectories.
- In **Year 10**, exclusions depress attainment, Level 2 completion and employment outcomes for disadvantaged pupils, while low-ability pupils experience short-run academic gains alongside weaker labour-market prospects.

The timing of exclusion therefore shapes not only the magnitude but also the direction of peer effects. Exclusions can stabilise classrooms, disrupt progression, or shift pupils across high-stakes academic thresholds depending on when they occur and which groups are exposed. As a result, the distributional consequences of exclusion policy are highly sensitive to both timing and pupil characteristics.

7. What About Reintegration?

The second part of the project examines how reintegration into mainstream schools operates in practice. On average, around 20–25% of pupils excluded in one academic year return to a mainstream school the following year. The remainder initially attend a Pupil Referral Unit (PRU) or Alternative Provision (AP). Pupils excluded in Years 10 and 11 typically complete compulsory schooling within the AP sector and are not reintegrated into mainstream education. Under England's Fair Access Protocol, local authorities allocate excluded pupils across schools, and all schools are required to participate. In principle, this should ensure that reintegration is evenly distributed. We test whether this is what happens in practice in two ways.

First, we estimate a school-level panel model examining whether the probability of receiving a reintegrated pupil depends on a school's prior reintegration activity and its observable characteristics. The results show that schools that reintegrated a pupil in the previous year are significantly less likely to do so again. In addition, schools with higher shares of children in need and children looked after are significantly more likely to receive reintegrated pupils. This suggests that reintegration is not randomly allocated, but instead follows systematic patterns linked to school composition.[1]

Second, we compare the characteristics of schools that have ever reintegrated a pupil with those that have never done so (Table 4). The differences are substantial and statistically significant. Schools that reintegrate pupils tend to serve more disadvantaged intakes: they have higher proportions of pupils eligible for free school meals (FSM), more students with special educational needs (SEN), and a larger proportion of Black pupils. They also have lower average

[1] We are unable to report the full panel regression results, as the coefficients on the Children in Need (CiN) and Children Looked After (CLA) variables cannot be disclosed under the Secure Research Service (SRS) data access rules.

Key Stage 2 prior attainment among incoming cohorts, a higher average IDACI score and a higher number of days of suspensions between Y7 and Y11.

Table 4 – School level characteristics by reintegration

	No reintegration	Reintegration		
	Mean (sd)	Mean (sd)	Diff	p-value
Average pupil counts	185.572	212.216	-26.64***	(9.05)
	78.259	67.208		
% ever FSM	0.283	0.367	-0.08***	(10.70)
% EAL	0.134	0.149	-0.01	(1.71)
% SEN	0.309	0.376	-0.07***	(12.59)
% Female pupils	0.522	0.478	0.04***	(5.86)
% White British	0.751	0.746	0.01	(0.49)
% Other white	0.04	0.047	-0.01**	(3.07)
% Mixed ethnicity	0.038	0.039	-0.00	(0.68)
% Asian	0.1	0.086	0.01*	(2.00)
% Black	0.042	0.057	-0.02**	(3.29)
% Other ethnic groups	0.019	0.018	0.00	(0.74)
Standardised KS2 English	0.134	-0.096	0.23***	(14.81)
	0.548	0.287		
Standardised KS2 Maths	0.152	-0.08	0.23***	(14.71)
	0.589	0.273		
Average IDACI scores	0.199	0.238	-0.04***	(7.68)
	0.112	0.123		
Suspended days Y7-Y11	0.449	0.627	-0.18***	(7.73)
	0.662	0.504		
Observations	748	2330	3078	

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

The regression evidence and the descriptive comparison point to the same conclusion: reintegrated pupils are disproportionately placed in schools that are already serving more disadvantaged and lower-attaining student populations. Pupils are disproportionately reintegrated into schools that are already serving more disadvantaged and lower-attaining student populations. To address the non-random allocation of reintegrated pupils across schools, we therefore adopt an instrumental variable strategy. Specifically, we instrument reintegration using the leave-one-out change in exclusion rates within a 10km radius, which provides plausibly exogenous variation in reintegration pressure and allows us to correct for the endogeneity arising from systematic differences across schools.

Using the instrumental variable strategy to account for the non-random allocation of reintegrated pupils across schools, we find no evidence of negative peer effects from reintegration. Across most outcomes, the estimates are small and statistically indistinguishable from zero. In particular, reintegration has no detectable impact on GCSE attainment, post-16 participation and completion overall, employment at age 21, or NEET status.

The only statistically significant effect emerges for Year 8 reintegration, which is associated with a 0.082 increase in the probability of completing a Level 3 qualification (significant at the 5% level). This positive effect stands in contrast to concerns about adverse spillovers and does not suggest negative externalities for peers. However, as it is the only significant estimate across a wide range of outcomes, it should be interpreted cautiously.

Overall, the results indicate that current school approaches to reintegrating excluded pupils into mainstream schools do not harm their classmates' educational or early labour-market outcomes.

Table 5 - Two Stage Least Square estimates of reintegration

Outcome	Reint Y8	Reint Y9	Reint Y10	Controls, School and cohort FE	N	Mean outcome
KS4 Maths						
Coeff	0.012+	0.003	0.010+	Yes	3,785,130	0.0799
[se]	[0.006]	[0.006]	[0.005]			
Kleibergen-Paap Wald F stat	48.37	33.40	51.07			
KS4 English						
Coeff	0.006	0.007	0.007	Yes	3,785,130	0.0918
[se]	[0.007]	[0.008]	[0.007]			
Kleibergen-Paap Wald F stat	48.37	33.4	51.07			
Level 2						
Coeff	0.004+	-0.000	-0.002	Yes	3,785,130	0.835
[se]	[0.003]	[0.003]	[0.002]			
Kleibergen-Paap Wald F stat	48.37	33.40	51.07			
Level 3						
Coeff	0.008**	0.000	0.003	Yes	3,785,130	0.613
[se]	[0.003]	[0.003]	[0.003]			
Kleibergen-Paap Wald F stat	48.37	33.40	51.07			
Employed at 21						
Coeff	0.004	0.001	-0.001	Yes	3,228,650	0.794
[se]	[0.003]	[0.002]	[0.002]			
Kleibergen-Paap Wald F stat	48.35	33.32	48.69			
NEET at 21						
Coeff	-0.004	-0.002	0.000	Yes	3,228,650	0.162
[se]	[0.002]	[0.002]	[0.002]			
Kleibergen-Paap Wald F stat	48.35	33.32	48.69			

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. School fixed effect linear regression estimated. Each row-column combination is a separate regression. Standard errors in brackets clustered at school and cohort level. Controls: KS2 Maths, KS2 English, EAL, FSM (up to 11), Statement or EHC plan (up to 11), SEN (up to 11), Ever looked after up to age 16, Pupil had ever been in need, Female, Unauthorized absence up to 12, Ethnicity dummies, urban dummy, IDACI score decile dummies, year dummies, dummies for missing KS2 and missing unauthorized absences.

Who is reintegrated?

Reintegration tends to involve a relatively advantaged subset of excluded pupils. As shown in Table 6, they have slightly higher prior attainment, with less negative KS2 scores in both maths and English, and exhibit fewer indicators of behavioural difficulty, including lower rates of prior suspensions and unauthorised absences. They are also somewhat less disadvantaged, being less likely to have ever been eligible for free school meals and living in marginally less

deprived areas. At the same time, differences in demographic composition are modest, though reintegrated pupils are more likely to have English as an additional language and to come from minority ethnic backgrounds. Overall, the evidence suggests that reintegration is not random: pupils who return to mainstream schools tend to be those with relatively stronger prior attainment and less severe behavioural histories within the excluded group.

Table 6 – Pupil level descriptive by re-integration status

	Excluded Mean (sd)	Reintegrated Mean (sd)	Diff	p-value
Female	0.258	0.242	0.016**	(2.98)
Ever FSM	0.757	0.709	0.047***	(8.79)
Standardised KS2 math scores	-0.475	-0.382	-0.093***	-8.26)
	(0.914)	(0.899)		
Standardised KS2 English scores	-0.619	-0.53	-0.089***	(7.45)
	(0.968)	(0.948)		
SEN	0.896	0.874	0.022***	(5.71)
EAL	0.098	0.123	-0.025***	(6.66)
White British ethnicity	0.732	0.696	0.036***	(6.58)
White Other ethnicity	0.04	0.037	0.002	(1.05)
Asian ethnicity	0.049	0.068	-0.019***	(7.00)
Black ethnicity	0.089	0.104	-0.015***	(4.13)
Mixed ethnicity	0.071	0.071	-0.000	(0.05)
Idaci score	0.312	0.302	0.011***	(5.11)
	(0.173)	(0.173)		
Unathorised absences at age 11	0.03	0.025	0.005***	(6.49)
	(0.067)	(0.056)		
Urban	0.786	0.761	0.025***	(6.13)
Suspended days Y8	1.807	1.523	0.284***	(9.51)
	(2.474)	(2.186)		
Suspended days Y9	1.657	1.271	0.385***	(13.41)
	(2.393)	(2.026)		
Suspended days Y10	0.67	0.58	0.090***	-(5.14)
	(1.446)	(1.31)		
Observations	34630	8108		

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

8. Teacher turnover

In addition to pupil outcomes, we examine whether exclusion affects school workforce stability, focusing on teacher turnover. Persistent disruption may alter teachers' working conditions, increasing stress, reducing job satisfaction, and ultimately leading to higher rates of staff exit. Teacher turnover therefore represents a potential mechanism through which exclusion and the behavioural environment in schools may affect pupils' learning. While descriptive patterns suggest that more challenging school environments may be associated with higher teacher turnover, we find no evidence that exclusions themselves increase staff exits.

Schools with higher exclusion rates also tend to differ in other ways that may affect teacher retention, making simple comparisons difficult to interpret. However, when we isolate variation in exclusions using local Alternative Provision capacity, we find no causal effect of exclusion on teacher turnover.

To study this, we construct a panel of schools observed at the academic-year level and estimate the effect of exclusion rates on teacher turnover.[2] This structure aligns the timing of exclusion decisions and staffing changes, both of which occur on a yearly basis. In our preferred specification, we relate teacher turnover to both contemporaneous and lagged exclusion rates. The contemporaneous measure captures immediate responses of teachers to current working conditions, while the lagged measure allows us to assess whether exposure to disruption and exclusion in the previous year has a persistent effect on staff retention.

Table 7 reports the first-stage relationship between changes in local Alternative Provision capacity and exclusion rates, where we aggregate exclusions across Years 8 to 10. Differently from the baseline specifications, we construct a cumulative measure of exclusions over this period and relate it to the normalised change in filled AP places within a given radius, excluding the focal school's own exclusions. The results show a negative and statistically significant relationship between local AP capacity, measured by filled AP places, and exclusion rates. A one-unit increase in the change in filled AP places within a 10km radius is associated with a reduction of 0.1509 exclusions per 1,000 pupils ($p < 0.01$), while the corresponding estimate using a 5km radius is smaller in magnitude at 0.0684 but more precisely estimated ($p < 0.001$).

We focus on the 5km specification as our preferred first stage, as it satisfies conventional weak instrument thresholds, with an F-statistic of 19.2, well above the rule-of-thumb value of 10. Consistently with the previous findings, tighter local capacity within a closer geographic radius leads to a statistically and economically meaningful reduction in exclusion rates.

Table 7 – First stage: the effect of change in filled AP places on exclusion

	Fraction of exclusions in Y8-Y10, per 1K	
Yearly change AP Y8-Y10, 10km	-0.1509**	
	[0.051]	
Yearly change AP Y8-Y10, 5km		-0.0684***
		[0.016]
Mean outcome	0.9382	0.9394
Observations	9,909	9,896
F-test	8.624	19.17
p-value	0.0033	0.0000

[2] Differently from the approach followed with the other outcomes, where we use school-by-cohort data, for turnover we use school-by-academic-year data. This is important for identification, as both exclusion and teacher turnover occur on a yearly basis. Aggregating at the cohort level (e.g. Key Stage 4 cohorts) would combine multiple academic years with different exposure windows, obscuring the timing of effects. In addition, cohort-level variation is likely to capture differences in cohort composition or difficulty; cohorts that are more disruptive may simultaneously experience higher exclusion rates and higher teacher turnover, so estimates would largely reflect teachers responding to more challenging cohorts rather than the causal effect of exclusion. The school-by-year panel instead exploits within-school variation over time, allowing us to isolate the relationship between exclusion and teacher turnover while controlling for time-invariant school characteristics.

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. School fixed effect linear regression estimated. Controls: School average KS2 Maths, school average KS2 English, % EAL, % FSM (ever), % SEN (up to 11), % Ever looked after up to age 16, % Pupil had ever been in need, % Female, average unauthorized absence up to 12, % by Ethnicity dummies, year dummies.

Table 8 reports the instrumental variable estimates of the effect of exclusion on teacher turnover, using cumulative exclusions across Years 8 to 10. Column (1) presents the specification with contemporaneous exclusion, while column (2) considers lagged exclusion. The estimates are small in magnitude and statistically insignificant in both cases. The coefficient on contemporaneous exclusion is negative (−0.0083) and precisely estimated, suggesting no evidence that higher exclusion rates increase teacher turnover within the same academic year. The lagged specification yields a positive but imprecise estimate (0.0048), again statistically indistinguishable from zero.

In terms of instrument strength, the contemporaneous specification is supported by a strong first stage (Kleibergen-Paap F-statistic of 19.17), exceeding conventional weak instrument thresholds. By contrast, the lagged specification is weakly identified, with an F-statistic of 3.47, and should therefore be interpreted with caution.

These findings provide some reassurance regarding school workforce stability. Despite concerns that challenging behavioural environments and higher exclusion rates may contribute to teacher attrition, we find no causal evidence that exclusion affects teacher turnover. While schools with higher exclusion rates often appear to experience greater staff turnover, this relationship disappears once we account for the fact that exclusions are more common in schools facing broader challenges. The absence of an effect on teacher retention is important in its own right, given ongoing concerns about teacher recruitment and retention across the school system. It also has implications for interpreting our peer-effect results. Specifically, it suggests that the adverse consequences associated with exclusion-related disruption are unlikely to operate through workforce instability, and instead reflect the direct impact of sustained disruption on pupils' learning environments.

Table 8 - Two Stage Least Square estimates of exclusions on teacher turnover

	Teacher turnover	
Excl Y8 to Y10	-0.0083	
	[0.010]	
Excl Y8 to Y10, lagged		-0.0014
		[0.009]
Mean outcome	0.1898	0.1913
Observations	9,896	7,224
Kleibergen-Paap Wald F stat	19.17	14.80

Notes: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. School fixed effect linear regression estimated. Controls: School average KS2 Maths, school average KS2 English, % EAL, % FSM (ever), % SEN (up to 11), % Ever looked after up to age 16, % Pupil had ever been in need, % Female, average unauthorized absence up to 12, % by Ethnicity dummies, year dummies.

9. Policy Implications

Exclusion and peer spillovers

This study shows that the timing of permanent exclusions matters not only for the excluded pupil, but also for the classmates who remain in mainstream schools. Disruptive behaviour generates real and persistent peer costs, particularly when it remains unresolved into the middle years of secondary school. Environments in which disruption persists into Year 9 and to a more limited extent those in Year 10 and culminates in exclusion are associated with meaningful reductions in GCSE attainment and weaker early labour-market outcomes among peers, with the largest harms falling on pupils who are already academically or socially vulnerable.

The results suggest that the peer effects of exclusion are not driven simply by the act of removal itself, but by the cumulative disruption that precedes it. Much of the negative spillover is explained by prior suspension intensity, a proxy for the severity and persistence of behavioural problems. Importantly, we find no evidence that these effects operate through changes in teacher retention, indicating that the primary mechanism is direct exposure to sustained disruption rather than broader changes in school staffing.

From a policy perspective, several implications follow.

First, early intervention is critical. The evidence suggests that stabilising classrooms earlier in secondary school, before behavioural problems intensify, may help prevent the larger peer costs observed in mid-secondary years. Policies that strengthen early behavioural assessment, provide timely targeted support, and address unmet special educational or pastoral needs may reduce cumulative disruption within cohorts.

Second, mid-secondary disruption is particularly harmful for vulnerable pupils. Year 9 exclusions generate the largest negative spillovers, especially for low-ability and disadvantaged students. This indicates that persistent classroom instability during key academic transition years can widen existing inequalities. Targeted support for at-risk cohorts during Years 8 and 9 may therefore be especially important in limiting long-run attainment gaps.

Third, exclusion involves a fundamental trade-off. A substantial body of evidence shows that excluded pupils themselves face large long-run costs. Our findings add that peers also bear costs when disruption persists. The policy challenge is therefore not whether exclusion is "good" or "bad," but how to minimise total social harm. Delaying action in the presence of sustained disruption appears costly for classmates, yet exclusion carries serious consequences for the excluded pupil. This underscores the need for high-quality alternative provision, effective reintegration pathways, and earlier preventative strategies that reduce the likelihood that permanent exclusion becomes necessary.

Reintegration and peer spillovers

An important complementary finding is that we do not detect negative spillover effects from reintegration onto new peer groups. Across specifications, reintegrating previously excluded pupils into mainstream schools does not reduce attainment or worsen post-16 outcomes for

their classmates. If anything, the point estimates are small and in some cases positive, with only isolated statistically significant effects.

This null finding is notable given the institutional context. Reintegrated pupils tend to have more favourable characteristics than excluded pupils overall, while schools that reintegrate them tend to serve more disadvantaged student populations. These opposing selection patterns would, in principle, be expected to work in different directions. Nonetheless, we find no evidence that reintegration harms incumbent peers.

From a policy standpoint, this suggests that carefully managed reintegration need not generate additional peer costs. Concerns that returning previously excluded pupils will systematically disrupt new cohorts are not supported by the evidence. Instead, the results indicate that the primary peer costs arise from prolonged unresolved disruption prior to exclusion, rather than from the subsequent return of pupils through structured reintegration arrangements.

Taken together, the evidence suggests that improving the timing and coordination of behavioural support, particularly before and during the transition into mid-secondary education, could play an important role in protecting both vulnerable pupils and their classmates. At the same time, maintaining credible and well-supported reintegration pathways appears consistent with peer stability, helping balance the competing social costs associated with exclusion.

10. What Needs to Happen Next?

The central policy challenge

The central policy question raised by our findings is not whether schools should exclude earlier. The evidence does not support a simple prescription of accelerating removal. Rather, it highlights a more demanding and consequential challenge: how to intervene earlier and more effectively, before disruption becomes persistent and peer costs accumulate.

Our results show that the largest peer harms arise when behavioural problems intensify and remain unresolved into the middle years of secondary school. By the time exclusion occurs in Years 9 and 10, disruption has often been ongoing for several years. This pattern is consistent with the absence of effects on teacher turnover, suggesting that peer harms arise directly from prolonged disruption rather than from changes in school staffing or organisational instability. The policy priority, therefore, is not the timing of exclusion per se, but the timing and quality of intervention.

This shifts the focus toward three interrelated objectives:

- Intervening earlier, when behavioural difficulties first emerge rather than after repeated cycles of suspension.
- Providing targeted behavioural and mental health support, particularly for pupils with unmet social, emotional, or special educational needs.
- Stabilising classrooms before disruption becomes entrenched, reducing the cumulative peer spillovers that we document in mid-secondary years.

A range of policy approaches may help achieve these goals. Strengthened early behavioural support systems, including structured monitoring and rapid-response interventions, could prevent escalation. Improved access to mental health services, better-targeted SEND resources, and wider pastoral support may help address underlying drivers of disruptive behaviour and ensure that pupils receive appropriate support before difficulties intensify. In addition, schools may benefit from structured, short-term provision within mainstream settings, including internal Alternative Provision models or inclusion bases, that can reduce classroom disruption while maintaining continuity of education and avoiding some of the long-run costs associated with permanent exclusion.

Importantly, our findings do not suggest that exclusion should be eliminated as a policy tool. Rather, they indicate that relying on exclusion after prolonged disruption is costly for peers, while exclusion itself carries substantial long-term risks for the excluded pupil. The central policy challenge is therefore preventative: designing systems that identify risk earlier, coordinate behavioural and academic support more effectively, and contain disruption before it generates cumulative harm within cohorts.

In this sense, the debate should move beyond the binary question of whether to exclude, and toward the broader question of how education systems can protect both vulnerable individuals and their classmates through earlier, better-targeted, and more coordinated intervention.

The evidence in this study points to the importance of acting earlier and more strategically. Translating these findings into policy requires attention to implementation, monitoring, and further evidence.

1. Stronger early intervention systems

If the largest peer costs arise when disruption becomes persistent, then schools need earlier access to behavioural and specialist support. This includes timely referral pathways to mental health services, specialist SEND assessment, and structured behavioural programmes before patterns of suspension accumulate. Early intervention systems should be designed not only to respond to acute incidents, but to identify pupils whose needs are escalating over time.

Ensuring that schools have predictable and adequately funded access to specialist expertise is central to preventing disruption from becoming entrenched. This aligns with the government's proposed *Experts at Hand* model within the SEND reform programme, which aims to provide schools with more timely access to specialist support. However, the effectiveness of such an approach will depend on whether sufficient workforce capacity and funding are available to meet demand, particularly given ongoing concerns about shortages of educational psychologists and other specialist practitioners (Zuccollo and Hutchinson, 2026).

2. Monitoring cumulative disruption exposure

Our findings suggest that repeated suspensions are a strong signal of intensifying disruption. Accountability and monitoring systems could therefore track prolonged suspension histories as early warning indicators. Rather than focusing solely on the occurrence of exclusion, policymakers may wish to consider cumulative exposure to suspension within cohorts.

Our findings suggest that repeated suspensions are a strong signal of intensifying disruption. Accountability and monitoring systems could therefore track prolonged suspension histories as early warning indicators. As policy increasingly emphasises alternatives to suspension, including internal exclusion, there is also a case for improving the systematic recording and monitoring of internal exclusion (Wielar 2026). This would help schools identify pupils experiencing repeated disciplinary interventions at an earlier stage and assess whether particular groups are disproportionately affected, enabling more timely and targeted support.

Monitoring such patterns could help identify classrooms or year groups where disruption is building over time, prompting earlier support before peer harms materialise in exam years.

3. Safeguarding equitable reintegration

We find no evidence that reintegration generates negative spillovers for new peer groups. However, reintegration decisions often fall disproportionately on schools serving more disadvantaged intakes. Safeguarding equity in reintegration practices is therefore essential.

Local coordination mechanisms may need to ensure that the responsibility for reintegration does not concentrate in already stretched schools. Fair distribution of placements, combined with adequate transitional support, can help maintain peer stability while preserving reintegration as a viable pathway.

4. Further research

Important questions remain about the longer-term trajectories of excluded pupils themselves and how these interact with the timing and route of exclusion. A complementary Nuffield Foundation–funded project, *Out of Sight: Exclusions, Alternative Provision and Later Life Outcomes*, led by Dave Thomson (FFT Education Datalab), examines long-run labour-market and justice outcomes for excluded pupils. The project evaluates how outcomes differ depending on the pathway to exclusion, including permanent exclusion, placement in alternative provision, and managed moves, and depending on the timing of exclusion within the school career. A second Nuffield Foundation–funded project, *Exclusionary Practice in English Secondary Schools*, led by Whitney Crenna-Jennings (Education Policy Institute) investigates how schools use exclusionary practices, including suspensions, permanent exclusions, managed moves, and internal exclusion, and how these practices vary across schools and pupil groups. Together, these projects complement the present study by examining both the institutional drivers of exclusionary practices and the long-term consequences for excluded pupils, helping to build a more complete evidence base on how schools can balance the needs of individual pupils with the learning environment of their peers.

Together with the present study, this work will provide a more complete picture of how timing shapes both peer spillovers and the life-course trajectories of excluded pupils. By assessing whether the stage of schooling also matters for excluded pupils' long-term outcomes, it will help fill an important policy gap and inform decisions about when and how different pathways are used.

Taken together, the next phase of policy development should focus on strengthening early support systems, improving monitoring of cumulative disruption, ensuring equitable reintegration practices, and deepening the evidence base on long-term exclusion pathways.

Only by considering both peer spillovers and the life chances of excluded pupils can policymakers design responses that minimise total social harm.

Final Takeaway for Policymakers

Persistent classroom disruption imposes real and lasting costs on classmates — particularly on pupils who are already academically or socially vulnerable. When behavioural difficulties remain unresolved, harm accumulates over time, with the largest peer losses emerging in the middle years of secondary school.

At the same time, permanent exclusion carries well-documented long-run risks for the excluded pupil. The policy challenge is therefore not whether exclusion is simply "good" or "bad," but how to minimise total social harm.

Our evidence points to five clear conclusions:

- Delayed intervention allows disruption, and peer harm, to compound.
- Exclusion itself is costly for those removed.
- Reintegration, when structured and supported, does not generate negative spillovers for new peer groups.
- We find no evidence that exclusion increases teacher turnover, suggesting that higher exclusion rates do not themselves contribute to workforce instability.
- The peer effects we document appear to arise from direct exposure to sustained disruption rather than from changes in teacher retention.

The balance of evidence supports earlier, preventive, and inclusive intervention, not reliance on exclusion as a late-stage, reactive solution.

References

Bacher-Hicks, A., Billings, S.B. and Deming, D.J., 2024. The School-to-Prison Pipeline: Long-Run Impacts of School Suspensions on Adult Crime. American Economic Journal: Economic Policy, 16(4), pp.165-193.

Carrell, S.E. and Hoekstra, M.L., 2010. Externalities in the classroom: How children exposed to domestic violence affect everyone's kids. American Economic Journal: Applied Economics, 2(1), pp.211-228.

Carrell, S.E., Hoekstra, M. and Kuka, E., 2018. The long-run effects of disruptive peers. American Economic Review, 108(11), pp.3377-3415.

Cuellar, A.E. and Markowitz, S., 2015. School suspension and the school-to-prison pipeline. International Review of Law and Economics, 43, pp.98-106.

Department for Education. Suspensions and permanent exclusions in England, 2023-24, DfE, https://explore-education-statistics.service.gov.uk/find-statistics/suspensions-and-permanent-exclusions-in-england/2023-24

Lavy, V., Silva, O. and Weinhardt, F., 2012. The good, the bad, and the average: Evidence on ability peer effects in schools. Journal of Labor Economics, 30(2), pp.367-414.

Lavy, V. and Yancu, A., 2025. Violent Peers at School: Impacts and Mechanisms (No. w34482). National Bureau of Economic Research.

McAra, L. and McVie, S., 2010. Youth crime and justice: Key messages from the Edinburgh Study of Youth Transitions and Crime. Criminology & Criminal Justice, 10(2), pp.179-209.

Pope, N.G. and Zuo, G.W., 2023. Suspending suspensions: The education production consequences of school suspension policies. The Economic Journal, *133*(653), pp.2025-2054.

Sanders, J., Liebenberg, L. and Munford, R., 2020. The impact of school exclusion on later justice system involvement: Investigating the experiences of male and female students. Educational Review, 72(3), pp.386-403.

Wielar, L. 2026. An analysis of London Secondary schools' use of internal exclusion. Education Policy Institute https://epi.org.uk/publications-and-research/an-analysis-of-london-secondary-schools-use-of-internal-exclusion/

Zuccollo, J. and Hutchinson, J. 2026. Educational psychologists in England. Education Policy Institute