

# An Addendum to the Evaluation of Whole School SEND (WSS) Review: A cluster randomised controlled trial Evaluation Protocol



Evaluator (institution): Manchester Metropolitan University  
Principal investigator(s): Sandor Gellen & Stephen Morris

Template last updated: December 2022

## Evaluation summary

<b>Project title</b>	An Addendum to the Evaluation of Whole School SEND (WSS) Review: A cluster randomised controlled trial
<b>Developer</b> <i>(Institution)</i>	Nasen
<b>Evaluator</b> <i>(Institution)</i>	Manchester Metropolitan University
<b>Principal investigator(s)</b>	Sandor Gellen and Stephen Morris
<b>Protocol author(s)</b>	Sandor Gellen and Stephen Morris
<b>Trial design</b>	Two-arm cluster randomised controlled trial with random allocation at school level
<b>Trial type</b>	Efficacy
<b>Pupil age range and Key stage</b>	15-16, KS4
<b>Number of schools</b> <i>(at design stage)</i>	145 <sup>1</sup>
<b>Number of pupils</b> <i>(at design stage)</i>	4,540
<b>Primary outcome measure and source</b>	Grade in GCSE English Language (NPD) (SEND pupils only – Year 8)
<b>Secondary outcome measure and source</b>	Year 8 cohort: <ul style="list-style-type: none"><li>• Grade in GCSE English Language (NPD) (all pupils)</li><li>• Grade in GCSE Mathematics (NPD) (SEND pupils)</li><li>• Grade in GCSE Mathematics (NPD) (All pupils)</li></ul> Year 9 cohort: <ul style="list-style-type: none"><li>• Grade in GCSE English Language (NPD) (SEND pupils only)</li></ul>

<sup>1</sup> The original protocol anticipated a sample of 160 schools. Ultimately, 156 schools were recruited, of which 11 later withdrew from the evaluation, resulting in 145 schools being retained.

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>• Grade in GCSE English Language (NPD) (all pupils)</li><li>• Grade in GCSE Mathematics (NPD) (SEND pupils)</li><li>• Grade in GCSE Mathematics (NPD) (All pupils)</li></ul> |
|--|--|

## Protocol version history

Version	Date	Reason for revision
1.2 [ <i>latest</i> ]		
1.1		
1.0 [ <i>original</i> ]	28/03/2025 <sup>2</sup>	

---

<sup>2</sup> This is the first protocol for the addendum analysis. Please note an original and an amended protocol, associated with the activities of the main report (currently under review), have already been published on the EEF website: <https://educationendowmentfoundation.org.uk/projects-and-evaluation/evaluation/evaluation-guidance-and-resources/protocol-study-plan-and-sap-templates>

# Contents

Evaluation summary .....	1
Protocol version history .....	3
Study rationale and background .....	6
Further evaluation of the WSS Review – the present study .....	10
Intervention .....	11
Theory of change .....	14
Impact evaluation design .....	17
Research questions .....	17
Design .....	17
Outcome measures .....	20
Baseline measures .....	20
Primary outcome .....	20
Secondary outcomes .....	21
Sample size .....	21
Randomisation .....	22
Statistical analysis .....	23
Primary analysis .....	23
Secondary analysis .....	23
Estimation of effect sizes .....	24
Sub-group analyses .....	24
Analysis in the presence of non-compliance .....	25
Additional analyses and robustness checks .....	25
Missing data analysis .....	26
Implementation and process evaluation (IPE) design .....	27
Cost evaluation design .....	27
Ethics and registration .....	27
Data protection .....	28
Personnel .....	30

Risks.....	30
Timeline.....	30
References.....	32

## **Tables**

Table 1: Overview of duration and dosage of the programme.....	14
Table 2: Trial design .....	18
Table 3: Sample size calculations .....	21
Table 4: Timeline .....	30

## **Figures**

Figure 1: Logic model .....	15
-----------------------------	----

## Study rationale and background

Students with special educational needs or disabilities (SEND) represent a significant and often vulnerable part of the secondary school population, whilst growing in number since 2016 (Department for Education, 2024a) and becoming an increasing policy priority in recent years. The SEND identification process is typically overseen by the SENDCo (a qualified teacher holding or working towards a qualification in SEND coordination) who gathers evidence from teachers, parents and the pupils themselves, and specialists if this is considered necessary (Department for Education, 2015).

Students may be identified as needing SEN support and schools must put in place additional support, resources and interventions to support that child. Students whose needs are not met through this approach, and who require more support, are typically put forward for an Education and Health Care assessment, which is the responsibility of the school's Local Authority, and this may result in an Education and Health Care Plan (EHCP) (Department for Education, 2015). School leaders report substantial challenges in making additional provision for pupils with SEND, with increasing demand for specialist professional assessments and rising levels of need, exacerbated by the Covid-19 lockdowns. A key aspect of the context for secondary schools is a system that is widely regarded as failing to deliver the support needed by vulnerable children with SEND.

In addition, there are substantial variations in the rate of identification of SEND between primary schools, so much so that a recent analysis shows that: 'which primary school a child attends makes more difference to their chances of being identified with SEND than anything about them as an individual, their experiences or what local authority they live in (Hutchinson, 2021: 7). Students with SEND are disproportionately likely to be excluded from school, to be eligible for free school meals and to be 'looked after' or identified as a child in need (Department for Education, 2019a).

Research over recent years has highlighted the importance of a broader approach to inclusive pedagogy for all learners (Florian, Rouse, & Black-Hawkins, 2016; Florian & Spratt, 2013; Lewis & Norwich, 2004), pointing to the need to develop schools as inclusive learning environments, rather than focusing primarily on specialist approaches for individuals identified with SEND. Equally, there is a strand of research in the field of inclusive education over the last thirty years addressing the development of more inclusive practices for diverse learners, including those with SEND, seeing this as a whole-school issue (Hick & Thomas, 2008). A key example is the Index for Inclusion (Booth & Ainscow, 2002), which provides a process and resources to support inclusive school development.

The Whole School SEND (WSS) Review is best understood against the backdrop of this broader endeavour aimed at supporting the development of more inclusive school cultures. The WSS Review process includes:

- SENDCo training on self-evaluation and peer mentoring provided by an experienced SEND reviewer.
- The use of an evidence-based framework which draws on a school's current information, robust data and contextual factors to structure the review.

- Peer-to-peer support and a reflection network to facilitate a collaborative, localised and grassroots approach to developing SEND provision.

For this trial, a further layer of support was added through consultancy for SENDCos and CPD at regional networking events, provided by nationally recognised consultants. Thus, it is more akin to the programme of support that might be offered by WSS to Local Authorities or Multi-Academy Trusts (MATs).

In relation to processes of change, Ainscow, Booth, & Dyson (2006) point to the benefits of engaging stakeholders with evidence that can provoke 'principled interruptions' in professional discourses, providing opportunities for reflection on previously established practices. In this sense, WSS Review can be viewed as seeking to promote the development of more inclusive practices by engaging school leaders and acting as a catalyst for school-led change, focusing on local priorities. Thus, the WSS Review process reflects the premise that excellent teaching for pupils with SEND is excellent teaching for all.

The role of the school Special Educational Needs and Disability Coordinator (SENDCo) has developed significantly in recent years, with a mandatory qualification and more detailed guidance in the revised Code of Practice for SEND (Department for Education, 2015). Whilst this role is firmly embedded in the infrastructure of the SEN funding system and is increasingly seen as a route toward school leadership, there is less evidence of the impact of SENDCos on developing inclusive practices at a whole-school level. Likewise, there is a dearth of rigorous evaluation evidence relating to specific whole-school level interventions that are relevant to secondary schools and can be adopted at scale.

The Whole School SEND (WSS) Review process was developed in response to the Department for Education (DfE) identifying a need for schools to access support for implementing 2014 SEND reforms (Bunter, 2018). DfE guidance encourages schools to commission a review using the Whole School SEND (WSS) materials, to reflect on SEND provision and explore different approaches to raising attainment. At local authority level, a substantial proportion of Local Area SEND Inspections identified weaknesses in provision (Ofsted/CQC, 2017), often resulting in a requirement for local authorities to issue a Written Statement of Action and provide support. For schools, the disproportionately high levels of exclusion of pupils with SEND remains critical (Department for Education, 2019a). This is likely to impact negatively on pupils' attainment and to reflect weaknesses in school-level support.

Given the context provided, it is both logical and feasible for the project to examine the effect on exclusions. The Whole School SEND (WSS) Review process is specifically designed to enhance SEND provision, with an explicit recognition that students with SEND are disproportionately likely to be excluded from school. The text references the high rates of exclusion among pupils with SEND as a critical issue, noting that this is often a sign of inadequate school-level support and that such exclusions can negatively impact pupil attainment.

In addition, the DfE guidance and Ofsted/CQC inspections highlight exclusions as a key indicator of where SEND provision may be failing. Since the WSS Review aims to foster more inclusive practices and improved outcomes for students with SEND, evaluating the

impact of the intervention on exclusion rates would provide valuable evidence of its effectiveness. Monitoring changes in exclusions—both fixed-term and permanent—before and after implementing the WSS Review could help assess whether the programme contributes to more inclusive environments and reduces the risk of exclusion for vulnerable students.

Therefore, including exclusions as an outcome measure in the project evaluation would align well with the rationale and objectives of the WSS Review, offering further insight into its broader impact on school culture and student well-being.

The WSS Review process aims to prioritise SEND provision in secondary schools by giving school leadership teams ownership of the process to support school development of SEND – ultimately with the aim of improving pupil outcomes.

Specific issues to address include:

- SEND provision tends not to be prioritised by strategic leadership teams in secondary schools and is not very well regulated (Curran, Moloney, Heavey, & Boddison, 2018; Wall, Van Herwegen, Shaw, Russell, & Roberts, 2019).
- SENDCos are most likely to be middle leaders and so in a difficult position to drive whole school change (Pearson, Mitchell, & Rapti, 2015).
- Ownership of the SEND agenda within secondary schools is often fragmented, in contrast to primary schools. This involves risk in terms of identification and support of pupils.
- SEND provision in secondary schools tends to have less focus on teaching and learning and is more about resources and pastoral concerns (Curran, Moloney, Heavey, & Boddison, 2020).
- Classroom teachers lack confidence in SEND provision (Ginnis, Pestell, Mason, & Knibbs, 2018).
- There is a lack of wider understanding in schools of what the SENDCo's role and responsibilities are (Curran et al., 2018).
- SENDCos may be in post prior to receiving training through the National Award for Special Educational Needs Coordination (Wall et al., 2019), and so may lack the required knowledge.

An evaluation of the initial DfE contract for WSS delivery noted that peer-mentoring, a requirement of the original DfE contract, was valuable and created 'significant learning opportunities' (Bunter, 2018). The evaluation showed evidence of promise in terms of the impact at school level, for example:

- The process enabled schools to build on what they were already doing well for pupils.
- More non-specialist SEND teachers were willing to look reflectively at their classroom practice.
- Subject leaders became more aware of SEND practice and curriculum differentiation.

- A wider awareness developed of the value of pupil progress data and its use in future curriculum planning.
- SEND operational practices were changed in some schools.
- Peer-to-peer mentoring was adopted by some teachers/groups outside of SEND.
- The use of peer-to-peer mentoring was valued by all participants.

In addition, particular challenges with the review process in secondary school settings were noted due to the size of such institutions resulting in greater chance of inconsistencies in SEND provision, as well as the behaviour and SEND teams working independently of each other (Bunter, 2018). A further additional challenge related to the tension between secondary schools working together and the competition between them in relation to student recruitment.

There is evidence to suggest that careful matching of schools and brokering of relationships may be important to the success of peer support between school leaders (Ainscow, 2015). The WSS Review process builds on substantive research focusing on school improvement and equitable education and engages peer support between school SENDCos as a key lever for change. Ainscow (2015) suggests that school partnership can be a powerful means of fostering improvements; however, 'such partnerships have to be carefully orchestrated, using evidence as a catalyst to focus attention on overlooked possibilities for moving practice forward' (Ainscow, 2015, page 143). Thus, the ways in which schools are partnered for school-to-school support may be important. However, school matching for peer support within the WSS Review process is based on pragmatic considerations such as local access and is aimed at the SENDCo level.

A key indicator is likely to be the degree of engagement of senior leaders and the extent to which the focus for the WSS Review process is seen within a school as largely restricted to students with identified SEND. Accordingly, the evaluation considers whether the WSS Review process and additional support delivered in this project had an impact on students with SEND and on all students, both in terms of their attainment and their well-being.

## Initial Trial Evaluation Design

This evaluation originally aimed to follow two cohorts of students (both SEND and non-SEND) over time identified at the beginning of the 2020/21 school year (Morris et al., 2020). In what follows we refer to the Year 9 cohort as those entering Year 9 in 2020/21 and who sat their GCSEs in summer 2023, and the Year 8 cohort as those entering Year 8 in 2020/21 and who sat their GCSEs in summer 2024. The primary outcome was the standardised mark in GCSE English Language examinations sat by Year 9 students with SEND in summer 2023. A secondary analysis was also planned, using GCSE English marks from Year 8 students with SEND as a co-primary outcome, with results for this cohort to be reported a year later. For both cohorts, examination results were to be collected directly from schools. This is because the primary outcomes were defined in terms of 'marks' rather than grades, and only grades can be obtained from the NPD. Delays caused by Covid-19 and school closures from March 2020 significantly impacted the evaluation, particularly in maintaining school engagement. This led to substantial attrition in GCSE data collection from schools for the Year 9 cohort. Given these challenges, the decision was made not to proceed with collecting GCSE results for the

Year 8 cohort from schools, as the sample size was deemed too small to maintain statistical power. Nevertheless, one secondary outcome—the SDQ self-completion questionnaire—was collected for Year 8 students. The ‘main’ report, which presents findings from the impact evaluation (primarily focusing on a reduced Year 9 cohort) alongside the implementation and process evaluation and cost evaluation results, is currently under review and is expected to be published around May 2025 (Lewin et al, under review).

### *Primary Analysis and Key Findings*

In the main report (Lewin et al, under review), the primary outcome was the standardised GCSE English Language *mark* for Year 9 SEND students in summer 2023, with analyses limited to this cohort. The results showed an adjusted standardised mean difference of 0.05 (95% CI: -0.08 to 0.17) between the intervention and control groups. Since the outcome was standardised, all reported differences are in standard deviation units. In practical terms, Year 9 SEND students in the intervention group scored 0.05 standard deviations higher than the control group, roughly equating to one additional month of progress. However, the 95% confidence interval (-0.08 to 0.17) includes zero and negative values, suggesting uncertainty about the intervention’s true impact. The p-value (0.46) indicates that, under the assumption of no true effect, observing an effect of 0.05 or greater is quite likely, meaning the observed difference is not statistically significant and could have occurred by chance.

The high attrition rate further complicates the interpretation of results. Out of all Year 9 SEND students originally randomised, only 1,939 (44%) had a valid baseline and endline attainment data available for the primary outcome analysis. Attrition rates were 58% in the intervention group and 55% in the control group. Additionally, 42% of intervention schools and 29% of control schools failed to provide GCSE marks at endline, raising concerns about potential bias and data reliability.

### **Further evaluation of the WSS Review – the present study**

It is important to note that although the study lost around 36 percent of the schools at analysis, most schools which dropped out did not explicitly withdraw from the study, but they simply failed to supply endline GCSE marks. This meant that - with the exception of 11 schools and 384 pupils who did explicitly withdraw - records, including school and pupil characteristics and baseline results were not deleted from the trial database. Data Sharing Agreements currently in place specify that MMU will follow up with the Y8 cohort and collect their GCSE scores upon completion. Hence, the trial database of 145 schools (72 in the intervention and 73 in the control arm) can be used to gather endline GCSE scores from the ONS SRS, without the need of directly re-engaging with schools and issue new MoUs and DSAs.

In this protocol we describe a new piece of work which aims to follow the Year 8 cohort through and collect their GCSE grades. To address the issue of reduced sample size—which would have limited the collection of standardised combined marks in GCSE English Language from schools—we propose obtaining GCSE English Language grades from the National Pupil Database (NPD) from within the ONS SRS. This approach allows us to retain the original sample size, including schools that did not continue participating in the evaluation, excluding only those schools and pupils who explicitly withdrew from the trial. Given that the original trial

was underpowered due to high levels of school attrition, this project can offer valuable insights into the overall effects of the program.

Additionally, we will collect GCSE grades for the entire Year 9 cohort and rerun the analysis for both Year 8 and Year 9. This additional work has three key benefits:

1. **Increased Precision** – A larger sample size will allow us to combine Year 8 and Year 9 cohorts in a single analysis (see the proposed primary analysis later in this document), providing a more precise estimate of the intervention effect.
2. **Comparability** – It enables a direct comparison with the published report by assessing intervention effects based on the full sample, rather than just the subset of schools that provided endline data.
3. **Bias Detection** – It allows for a more accurate estimate of the intervention effect and helps identify any biases in the main report potentially caused by missing not at random (MNAR) data and the reliance on collecting GCSE marks from schools. The main report assumed data was missing at random (MAR), suggesting that primary results were skewed downward due to sample loss and the absence of GCSE marks from some schools. Furthermore, given the extent of missingness, there is also reasonable doubts as to the reliability of the multiple imputation used in the main report. Access to the full cohort will enable us to examine the nature of missingness and its impact on conclusions (see discussions later under missing data analysis).

## **Intervention**

The Whole School SEND (WSS) Review process was developed to improve SEND provision in mainstream schools through the development of inclusive teaching, rather than specialised approaches; strengthening senior leader engagement and raising the profile of SEND in schools; as well as shifting from fragmented to distributed responsibility for SEND (all levels, including students and their parents/carers). The SEND Review is a structured, peer-to-peer evaluation of SEND provision across the school and leads to the creation of a bespoke Action Plan to target areas of priority and drive improvement. The SEND Review process has been manualised in a SEND Review guide. The process includes reviewer and mentoring training for SENDCos, an evidenced-based framework to support the process, and the development of peer-to-peer support networks.

The WSS Review process aspires to be an approach that is constructive, collaborative and owned by the school (rather than an audit or inspection process). Its aims are for school improvement in SEND provision without 'punitive' interventions. It seeks to draw on and support existing expertise and good practice within and across schools.

SENDCos can access the SEND Review Guide (and other supporting documentation) free of charge. They can participate in online training on the WSS Review process (free) or participate in face-to-face training for a fee. A school can commission the National Association for Special Educational Needs (nasen) to undertake a WSS Review (two options currently available, one more in-depth than the other) for a fee. Additional consultancy and follow-on training are also offered. A Multi-Academy Trust or a Local Authority can commission nasen to undertake a

SEND Review programme for a fee which includes peer review and action-planning. It is this latter option that has formed the basis of the intervention being evaluated in this trial.

The intervention, the WSS Review programme, was delivered to SENDCos who were expected to oversee the WSS Review process within their own school and to subsequently develop and implement a SEND Action Plan, targeting areas for improvement. The intervention provided training and support, facilitated networking, and provided two opportunities for each participating SENDCo to receive 1-1 coaching. Thus, the core element for the programme that is essential is peer-to-peer support which is facilitated by partnering schools for the WSS Review process.

The programme was delivered to the SENDCos in schools allocated to the intervention arm of the trial. The head teacher or a senior leader was invited to participate in the initial (online) meeting and the second (online) 1:1 coaching session at the end of the programme.

The SENDCos were expected to involve at least one senior leader in the self-evaluation of SEND provision. Partner SENDCos also engaged in peer-to-peer review of each other's SEND provision, and mutual support throughout the trial. Peer review visits included meetings with senior leaders and other key staff involved in SEND provision, as well as observations of teachers and their students. The SENDCos worked with various colleagues, including the senior leadership team, the SEND governor, staff in the SEND team and middle leaders, to develop the SEND Action Plan. All stakeholder groups were involved to varying degrees in the implementation of the SEND Action Plan. The underlying aim, in addition to developing inclusive education, was to improve the well-being, attendance levels and, in the longer term, attainment of students with SEND.

The WSS Review Guide, the key documentary resource, explores eight areas to help schools develop the effectiveness of their SEND practice:

- Outcomes for pupils with SEND
- The quality of teaching and learning for pupils with SEND
- Leadership of SEND
- The efficient use of resources
- Assessment and identification
- Working with parents and carers and pupils with SEND
- Monitoring, tracking and evaluation
- The quality of SEND provision

The guide outlines the six key stages of the WSS Review process, with details on how to operationalise these and a detailed framework to support self-evaluation and peer review, reflecting the eight areas of focus outlined above and encouraging reviewers to identify strengths and areas for development.

Additional supporting documentation provided through the WSS Review programme and collated through a Padlet (to provide a one stop shop, akin to the Whole School SEND gateway) included: slides from key events; links to three WSS webinars on distributed

leadership, leading governance, and developing an inclusive curriculum; WSS Teacher Handbook of SEND; EEF Special Educational Needs in Mainstream Schools Guidance Report; other relevant EEF Guidance Reports on parental engagement, effective use of teaching assistants, implementation; links to interesting and relevant research and articles; and the SEN Code of Practice.

Documentation adapted or created for the WSS Review programme included: a SEND Review Report template for peer reviewers identifying strengths, areas for developments and recommendations for next steps; a SEND Action Plan template; and a worksheet intended to support preparation for the second 1:1 coaching session.

The WSS Review process consists of 6 stages:

1. Identification: School identifies the need for a SEND Review
2. Self-evaluation: School completed a self-evaluation of current provision
3. Preparation: The peer reviewer requests preparatory information, analyses relevant data and confirms visit
4. School visit: The peer reviewer visits the school, collects evidence and delivers feedback
5. Reporting: The peer reviewer submits a written report within a timescale agreed with the school
6. Follow-up: Follow-up visits and support

The programme was structured around five key contacts between nasen facilitators and the school/SENDCos:

- SEND Reviewer training – self-evaluation of SEND provision, preparation for school visit, peer review process and reporting.
- Engagement Day 1 – supporting schools to progress from their self-evaluation and peer review to writing a SEND Action Plan identifying three priorities, actions and key stakeholders; CPD on distributed leadership and Quality First Teaching was also delivered.
- 1:1 support/coaching – focus on refining SEND Action Plans and beginning to put them into practice.
- Engagement Day 2 - supporting schools to implement their SEND Action Plans, with CPD on distributed leadership and adaptive teaching.
- 1:1 support/coaching - reflection on progress, particularly with regards to distributed leadership and subsequent SENDCo support.

SENDCos conducted the WSS Review process after the SEND Reviewer Training in October 2021 and were expected to submit their Peer Review Report before the first Engagement Day. The SEND Action Plan was written after Engagement Day 1. The facilitators had planned to encourage SENDCos to share the plan with their school's senior leadership team and governing body, and we observed this happening in two case study schools' 1:1 coaching

sessions. It was refined after the first 1:1 coaching session. SENDCos were given a template prior to the second 1:1 coaching session to support the reflection process.

As part of the delivery process, two external consultants (each highly regarded in the field of SEND provision in schools) were employed to lead on the WSS Review programme. They were supported by a WSS Project Manager and further admin support.

As tested in the trial, the WSS Review programme was initially to be delivered across 6 regions: The North East; North West; South West; South Central England and North-west London, and West Midlands. In practice the regional boundaries were not strictly kept to.

The programme was delivered from September 2021 to July 2022, a period of 12 months. As schools had begun to be recruited in the spring term 2020, various online meetings were held, and email communications were sent whilst SENDCos were waiting to begin the programme in order to keep them engaged. Table 1 summarises the duration and dosage of the programme.

Table 1: Overview of duration and dosage of the programme

Activity	When	Mode	Full Cohort/Regional Group/Individual	Duration
SEND Reviewer training - intro	June/July 2021	Online	Regional Group (SENDCo + SLT member)	60 minutes
SEND Reviewer training	September 2021	In-person	Regional Group	Full day
Engagement Day 1	November/December 2021	In-person	Regional Group	Full day
First 1:1 coaching session - intro	January-March 2022	Online	Regional Group	60 minutes
First 1:1 coaching session	January-March 2022	Online	Individual	30-45 minutes
Engagement Day 2	March/April 2022	In-person	Regional	Full day
Second 1:1 coaching session - intro	June 2022	Online	Full Cohort	45 minutes
Second 1:1 coaching session	June/July 2022	Online	Individual (SENDCo + SLT member)	40 minutes
Final reflections	July 2022	Online	Full Cohort	

Our observations of the delivery of the programme across the five regions suggest that implementation was consistent.

For more details on the background and the intervention, see the main report (Lewin et al., under review).

## Theory of change

The logic model below (Figure 1) captures our understanding of the WSS Review programme core inputs, the WSS Review programme outputs in terms of what will be produced or happen

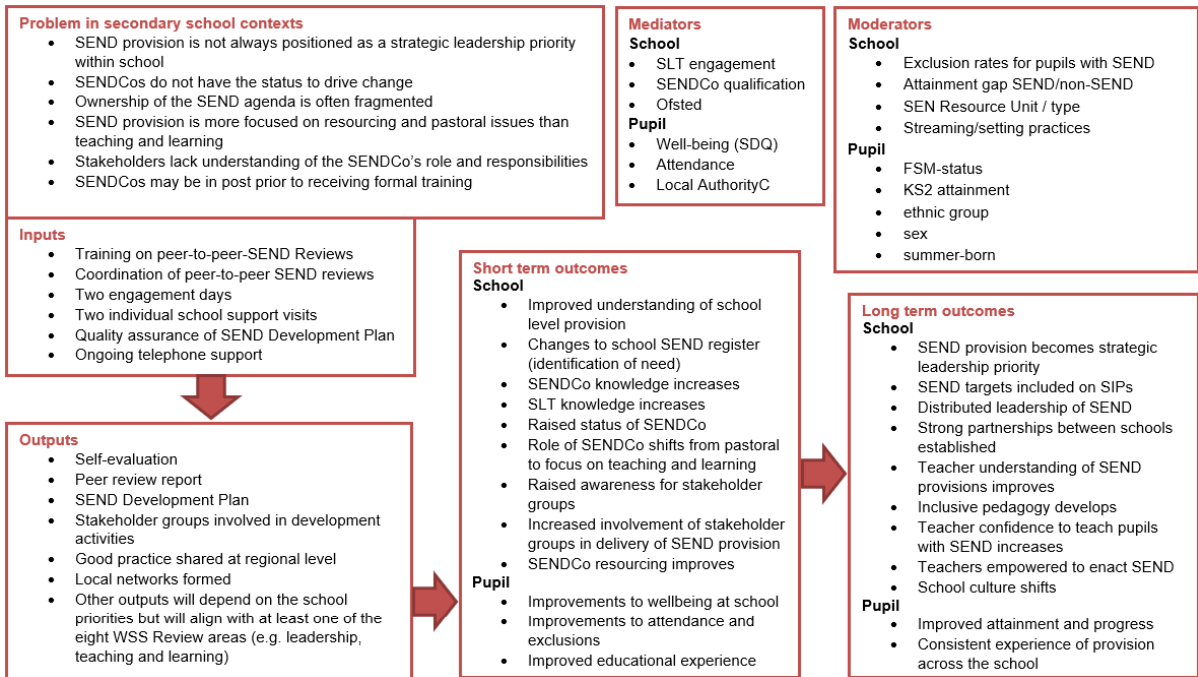
as a result of the process, the short-term outcomes at both the school level and the pupil level, and the long-term outcomes. The short-term outcomes are effectively mediators of the causal impact on students. These are the changes that need to take place for the student experience to improve, for their sense of well-being to increase, for them to be more engaged in learning, leading to reduced absenteeism, as well as reduced fixed-term and permanent exclusions. In turn, this will lead to longer term cultural shifts and ultimately to improvements in students' attainment and progress.

As noted above through the training and engagement days, SENDCos were signposted to a Padlet which was used to provide a one-stop shop of supporting documentation for the participating SENDCos. The delivery of Whole School SEND that the intervention was grounded in included the SEND gateway "to facilitate the sharing and provision of SEND focused resources and information" (Bunter, 2018, page 6). Although the Padlet offered a simpler range of resources than the SEND gateway, it included: slides from key events; links to three WSS webinars on distributed leadership, leading governance, and developing an inclusive curriculum; WSS Teacher Handbook of SEND; EEF Special Educational Needs in Mainstream Schools Guidance Report; other relevant EEF Guidance Reports on parental engagement, effective use of teaching assistants, implementation; links to interesting and relevant research and articles; and the SEN Code of Practice. Some of these resources were published during the delivery of the WSS Review programme (e.g. WSS Teacher Handbook of SEND).

Also as noted above, documentation adapted or created for the WSS Review programme included: a SEND Review Report template for peer reviewers identifying strengths, areas for developments and recommendations for next steps; a SEND Action Plan template; and a worksheet intended to support preparation for the second 1:1 coaching session.

The model was developed initially by the delivery team and revised following the IDEA workshop in September 2019.

Figure 1: Logic model



# Impact evaluation design

## Research questions

### *Primary research question*

1. What is the difference in average **Grade in GCSE English Language** among **Year 8 pupils with a SEND designation**, in schools exposed to the Whole School SEND Review programme, compared to Year 8 pupils with a SEND designation in control schools exposed to business-as-usual conditions?

### *Secondary research questions*

2. What is the difference in average **Grade in GCSE English Language** among **all Year 8 pupils** in schools exposed to the Whole School SEND Review programme, compared to all Year 8 pupils in control schools exposed to business-as-usual conditions?
3. What is the difference in average **Grade in GCSE Mathematics** among **Year 8 pupils with a SEND designation** in schools exposed to the Whole School SEND Review programme, compared to Year 8 pupils with a SEND designation in control schools exposed to business-as-usual conditions?
4. What is the difference in average **Grade in GCSE Mathematics** among **all Year 8 pupils** in schools exposed to the Whole School SEND Review programme, compared to all Year 8 pupils in control schools exposed to business-as-usual conditions?
5. What is the difference in average **Grade in GCSE English Language** among **Year 9 pupils with a SEND designation**, in schools exposed to the Whole School SEND Review programme, compared to Year 9 pupils with a SEND designation in control schools exposed to business-as-usual conditions?
6. What is the difference in average **Grade in GCSE English Language** among **all Year 9 pupils** in schools exposed to the Whole School SEND Review programme, compared to all Year 9 pupils in control schools exposed to business-as-usual conditions?
7. What is the difference in average **Grade in GCSE Mathematics** among **Year 9 pupils with a SEND designation** in schools exposed to the Whole School SEND Review programme, compared to Year 9 pupils with a SEND designation in control schools exposed to business-as-usual conditions?
1. What is the difference in average **Grade in GCSE Mathematics** among **all Year 9 pupils** in schools exposed to the Whole School SEND Review programme, compared to all Year 9 pupils in control schools exposed to business-as-usual conditions?

## Design

This trial is a two-armed, efficacy, cluster-randomised controlled trial. Secondary schools were recruited to the study and randomly assigned 1:1 to intervention or control conditions. Students entering Years 8 and 9 at September 2020 in schools allocated to receive the intervention were exposed to WSS Review programme. Conversely, students entering Years 8 and 9 in

September 2020 in schools assigned to control remained unexposed and received 'business as usual' support. 'Business as usual' support in the context of this study would include any whole-school initiatives that aimed to achieve a more inclusive school culture or that addressed students' wellbeing and attainment in an integrated manner. The focal sample for the primary analysis is students in these age cohorts designated SEND. Pupils with SEND are those identified as requiring "support" or have an Education Health Care Plan (EHCP).

The primary outcome is the GCSE English Language grade obtained by Year 8 students with SEND in summer 2024. Secondary outcomes include GCSE English Language grades for all Year 8 students, as well as GCSE Mathematics grades for both the overall Year 8 student sample and the SEND subgroup. For the Year 9 group, secondary outcomes include GCSE English and GCSE Mathematics grades for both SEND students and all students (see Table 2).

Table 2: Trial design

<b>Trial design, including number of arms</b>		Two-arm cluster randomised controlled trial
<b>Unit of randomisation</b>		School
<b>Stratification variables</b> (if applicable)		Regions: North East, North West, Yorkshire and Humber, East Midlands, West Midlands, London, South East, South West
<b>Primary outcome</b>	<b>Variable</b>	English Language attainment
	<b>Measure</b> (instrument, scale, source)	Grades recorded as 0-9, where 0 is an unclassified score at GCSE, NPD
<b>Secondary outcome(s)</b>	<b>Variable(s)</b>	English Language attainment Mathematics attainment
	<b>Measure(s)</b> (instrument, scale, source)	Grades recorded as 0-9, where 0 is an unclassified score at GCSE, NPD
<b>Baseline for primary outcome</b>	<b>Variable</b>	Reading attainment
	<b>Measure</b> (instrument, scale, source)	Prior attainment in English reading scaled score at KS2, NPD
<b>Baseline for secondary outcome</b>	<b>Variable</b>	Reading attainment Maths attainment
	<b>Measure</b> (instrument, scale, source)	Prior attainment in English reading scaled score at KS2, NPD Prior attainment in Mathematics scaled score at KS2, NPD

## Participant selection

Eligible schools were state-funded secondary schools located, initially, in five English regions. Although it was intended to restrict recruitment to only five regions in England, in practice the

delivery team extended recruitment beyond the boundaries of the initial five regions with school recruited in eight regions. Because recruitment was organised regionally, it was intended that randomisation, which was carried out in June 2021, would be stratified by the five original regions that were to be the focus of recruitment. Following actual recruitment practice, randomisation was stratified by eight regions. Schools were eligible for inclusion in the trial if they met the following conditions:

- The school is a mainstream secondary school.
- The school must not have previously commissioned a WSS Review.
- The school must be located in one of the following regions (based on Regional School Commissioner areas): North East, North West, South Central England and North West London, South West and West Midlands. Though as we have explained this was not adhered to.
- The school SENDCo and other members of the school leadership team have not previously engaged with the WSS Review process or similar audit.

Further, only one school could qualify for inclusion in the study per Multiple Academy Trust (MAT). This is because MATs often set policy in relation to SEND centrally, and we wish to avoid a situation where schools from the same MAT were assigned to different arms of the trial.

Within each recruited school the following students were in range of the study:

- All students in Years 8 and 9 at Tuesday 1<sup>st</sup> September 2020.
- The sample upon which the primary outcome analysis will be performed is students designated SEND; that is either 'support' and/or with an ECHP.

The school recruitment process proceeded as follows. The delivery team – nasen - identified and approached schools that met the selection criteria, collecting initial data, including school name, address, telephone number, and URN, along with the names and contact details of key members of staff. Schools were requested to sign a Memorandum of Understanding providing information about the project and its objectives, potential benefits for participating schools, a timetable of activities, data protection issues, and the responsibilities of all parties involved.

Once a school signed the Memorandum of Understanding, they issued a withdrawal notice to all parents of students in Years 8 and 9, allowing parents a 2-week period to respond. However, parents retained the right to withdraw their child at any time. Subsequent to this, the delivery team collected basic background information from the school. This information was sent electronically to the evaluation team and FFT Education (FFT). FFT Education was a partner organisation working with MMU to enumerate the Year 8 and 9 pupil samples, collect basic pupil-level information as well as further attainment data that were used in the primary and secondary analysis. The enumeration records were used to generate an initial school/pupil record in the trial database.

The delivery and research teams recruited 156 schools to the trial. Of these schools, 78 were assigned to the intervention and 78 to control. At endline 145 schools were retained in the

sample, 72 in the intervention group and 73 in control. The ‘as analysed’ sample for the primary analysis – using data gathered from the NPD - will comprise around 4,540 Year 8 students with SEND (approximately 2,160 in the intervention group and 2,380 in control).

## Outcome measures

### Baseline measures

For GCSE outcomes in English and mathematics, a baseline covariate will be derived from the scaled test scores in Reading and Mathematics at KS2, as appropriate, for inclusion in the adjusted analysis. These KS2 scores were collected for each retained pupil in Years 8 and 9. Since a proportion of KS2 scaled scores were missing from the trial dataset at baseline (3,402 missing Reading scores and 3,308 missing Mathematics scores across the total sample), we decided to request these from the NPD alongside GCSE grades.

### Primary outcome

In this addendum analysis, GCSE English grades are the primary outcome measure for the study, and these will be obtained directly from the NPD. This shift to using NPD data ensures a more consistent and comprehensive approach, as it includes English language attainment for all students, including those with SEND, across the full sample. Grades obtained in English are on a 1-9 scale with unclassified marks coded to ‘0’.

The theory of change for the WSS Review programme posits that a process of critical reflection will drive changes in school culture, leading to a renewed emphasis on teaching and learning for students with SEND. It is theorised that these changes will not only improve student wellbeing, reduce absenteeism, and enhance the overall school experience, but also lead to measurable improvements in academic attainment. Additionally, the intervention is expected to directly influence teaching practices, aligning them more closely with the needs of students with SEND, resulting in improved outcomes for both SEND and non-SEND students. In essence, the theory of change for the WSS Review programme suggests that attainment in national examinations at the end of KS4 will rise for all students, and in particular for students with SEND.

In the main project report, the primary outcome was the combined mark received by SEND students in their summer 2023 GCSE English Language examinations, which was collected directly from schools. The use of national examinations for assessment was not only a practical choice but also reflected substantive concerns. One issue with using marks is that they are not directly comparable across different awarding organisations in England (as discussed in the main report; Lewin et al, under review). This issue will not arise with GCSE grades, as they are standardised and directly comparable across all awarding bodies.

From a practical standpoint, GCSE grades offer the same advantages as marks, while also providing additional benefits. First, significant resources are invested by exam boards in the development and validation of GCSE assessments, making grades a reliable and valid measure of attainment. Second, the costs of collecting pupil-level GCSE results are lower compared to alternatives, such as administering commercial standardised tests — especially when using the NPD, rather than approaching schools directly. Finally, and most importantly, grades obtained from the NPD are unaffected by loss to follow-up, a challenge encountered

when collecting marks directly from schools (as detailed in the main report, where evaluators faced significant quality issues with marks data and difficulties obtaining marks from schools; Lewin et al, under review).

Conceptually, GCSE grades are widely understood, and results indicating that an intervention influences average GCSE grades are clear and easily interpretable by various stakeholders. Furthermore, as grades ultimately determine academic progression, they are a key measure for assessing the ‘attainment gap’, which is a central priority for the Education Endowment Foundation.

## Secondary outcomes

The WSS Review theory of change outlines expectations that changes in school culture towards greater inclusivity, coupled with a stronger focus on teaching and learning for students with SEND, would lead to improvements in attainment across national examinations — not just in English language, but also in other subjects, including mathematics, and for the wider student body. To assess this broader impact, GCSE grades in mathematics will also be obtained from the NPD.

GCSE mathematics grades are also on a 1-9 scale, with unclassified marks coded as ‘0’. These grades offer the same practical advantages as GCSE grades in English language, as previously discussed, including their standardisation and reliability as a measure of attainment.

## Sample size

Table 3 below presents a range of minimum detectable effect sizes (MDES) for all students, as well as for SEND and FSM subgroups. The MDESs are the smallest effect sizes which if true will yield tests for statistical significance at the 95 per cent level in which the null is rejected in 80 per cent of trials given the sample sizes proposed (and other assumptions).

Table 3: Sample size calculations

		Overall	SEND	FSM
<b>Minimum Detectable Effect Size (MDES)</b>		<b>0.09</b>	<b>0.11</b>	<b>0.12</b>
<b>Pre-test/ post-test correlations</b>	level 1 (pupil)	0.56	0.52	0.54
	level 2 (class)	n/a	n/a	n/a
	level 3 (school)	0.75	0.73	0.64
<b>Intracluster correlations (ICCs)</b>	level 2 (class)	n/a	n/a	n/a
	level 3 (school)	0.07	0.08	0.09
<b>Alpha</b>		0.05	0.05	0.05
<b>Power</b>		0.8	0.8	0.8
<b>One-sided or two-sided?</b>		Two	Two	Two
<b>Average cluster size</b>		190	31	51
<b>Number of schools</b>	Intervention	72	72	72

	Control	73	73	73
	<b>Total</b>	145	145	145
<b>Number of pupils</b>	Intervention	13,318	2,160	3,513
	Control	14,259	2,380	3,894
	<b>Total</b>	27,577	4,540	7,407

The presented MDES estimates calculated using the pre/post-test correlations obtained at analysis of the Year 9 cohort, alongside the observed intraclass correlation coefficients reported by Lewin et al. (under review). The table also incorporates the final retained sample sizes, including the Year 8 cohort only. We do not anticipate significant issues with matching pupil records to NPD data, therefore, the table does not present alternative scenarios accounting for attrition.

The table indicates that the SEND subsample at analysis will comprise approximately 4,540 Year 8 students. This figure is an estimate, as 479 pupils in the current dataset are missing a SEND indicator. These missing indicators will also be obtained from the NPD, and the estimated sample size assumes that the proportion of imputed SEND pupils will be similar to what is observed in the complete case sample.

The observed ICCs for all three samples were substantially lower than the 0.20 value used in the original sample size calculations, which was noted as potentially conservative. Specifically, at analysis, the intraclass correlations were 0.07 for the overall sample, 0.08 for the SEND sample, and 0.09 for the FSM sample. Regarding pre/post-test correlations, these were lower at the pupil level than initially assumed but higher at the school level. We have no reason to expect these values to differ substantially once the final retained sample is complete and missing scores are imputed.

As a result, the MDES values for the full sample are estimated to be 0.09 for all pupils, 0.11 for SEND pupils, and 0.12 for FSM pupils — lower than the 0.11, 0.16, and 0.14 reported in the main report (Lewin et al, under review), which was based on a reduced Year 9 sample.

The MDESs are calculated using the PowerUp software (Dong & Maynard, 2013).

## Randomisation

Stratified randomisation was performed in June 2021 with strata based on region. To attempt to recruit 160 schools, the developer was given a target to recruit around 28 schools in each of the initially identified regions in which the trial was to run (that is across five regions). Once the developer hit the target number of schools in a given region, randomisation was undertaken for the relevant region. A random number seed was chosen and stored separately. The following process was followed for each regional-based stratum:

- Each school in the region was assigned a number from a uniform distribution
- Schools were arranged in ascending order on the basis of the random number;
- The ordered list of schools was split at the mid-point; and

- Schools in the top half of the list were allocated to the intervention, those in the bottom half to control.

The randomisation was carried out by a researcher based in the Policy Evaluation and Research Unit, the Department of Sociology at Manchester Metropolitan University. Randomisation was carried out such that the researcher was blind to the identities of the schools.

The randomisation was undertaken in STATA v16 statistical software.

## Statistical analysis

Statistical analysis will be conducted based on the intention-to-treat principle. The primary and secondary analyses largely follow the analytic models applied in the main report (currently under review). As discussed below, further analysis will examine the potential impact of missing data on the sample estimates from the main evaluation report. This will be done by directly comparing results in the main report, for the Year 9 cohort, based on data collected from schools, with the estimates obtained here for the Year 9 cohort where data are collected from the NPD and thus less affected by the missingness that affected the initial Year 9 analysis (see the discussion under missing data analysis).

### Primary analysis

The primary analysis estimates the average effect of the WSS Review programme on GCSE English Language attainment for the Year 8 cohort with SEND, using their English Language GCSE Grades from the 2024 summer examinations. This effect will be assessed through a hierarchical mixed-effects linear model:

$$Y_{ij} = \beta_0 + \beta_1 T_j + \beta_2 X_{ij} + \beta_3 R_j + u_j + \varepsilon_{ij}$$

Where  $Y_{ij}$  is the English Language GCSE Grade for pupil  $i$  in school  $j$ .  $T_j$  is an intervention group binary indicator coded to '1' if school ' $j$ ' is allocation to the intervention, zero otherwise.  $X_{ij}$  is pupil  $i$ 's KS2 scaled score in reading which is entered into the model as a pre-test covariate. The covariate  $R_j$  captures the region in which school  $j$  was located, reflecting the stratification used in randomisation. The  $\beta$ s are the unknown parameters to be estimated, with the sample estimate of  $\beta_1$  representing the effect of the WSS Review programme on English attainment for students with SEND. The terms  $u_j$  and  $\varepsilon_{ij}$  are school and pupil level random effects that are assumed to be normally and independently distributed in the population with zero mean and variances  $\sigma_u^2$  and  $\sigma_\varepsilon^2$ . The intraclass correlation coefficient is therefore  $\rho = \sigma_u^2 / \sigma_u^2 + \sigma_\varepsilon^2$ .

The model will be estimated in Stata v18 using the *mixed* command with restricted maximum likelihood.

### Secondary analysis

The secondary analysis will assess the impact of the WSS Review on GCSE English Language grades for all students, as well as GCSE Mathematics grades for all students and SEND pupils only. More specifically, secondary outcomes include GCSE English Language

grades for all Year 8 students, as well as GCSE Mathematics grades for both the overall Year 8 cohort and the SEND subgroup. For Year 9 students, secondary outcomes consist of GCSE English and GCSE Mathematics grades for both SEND students and the entire student group.

To obtain sample estimates, we will run separate regression models, following the same approach as in the primary analysis.

### Estimation of effect sizes

The intervention effect estimated from the primary outcome regression model will be converted into an effect size. This involves fitting a basic variance components model for the outcome with two random effects (pupil and school):

Where  $y_{ij}$  refers to the outcome for pupil  $i$  in school  $j$  and  $u_j$  and  $\epsilon_{ij}$  correspond to school and pupil level errors respectively.

From this model, we will obtain sample estimates of the unconditional variances for  $u_j$  and  $\epsilon_{ij}$  denoted as namely,  $\hat{\sigma}_u^2$ , and  $\hat{\sigma}_\epsilon^2$  respectively. The effect size (ES) will then be calculated as:

$$ES = \frac{\hat{\beta}_1}{\sqrt{\hat{\sigma}_u^2 + \hat{\sigma}_\epsilon^2}}$$

Where  $\hat{\beta}_1$  is the estimated coefficient for the binary treatment indicator from the primary outcome regression model.

The confidence interval for the ES will be derived by taking the upper and lower bounds of the 95% confidence interval for  $\hat{\beta}_1$  from the primary outcome analysis and dividing both limits by the denominator in the equation above.

We will report the ES, regression coefficient, 95% confidence interval for the ES, and the continuous p-value, along with estimates of the intraclass correlation coefficients (ICCs) and the ES denominators. The same method will be applied to compute effect sizes for all secondary outcomes.

### Sub-group analyses

Subgroup analyses will assess the impact of the WSS Review programme on English language GCSE grades for students classified as ever-FSM within the Year 8 group.

Following the EEF statistical guidelines, we will conduct subgroup analysis using both the restricted sub-sample and interaction approaches. The restricted sub-sample approach involves applying the primary analysis model separately to pupils categorised as 'EverFSM' and 'Not EverFSM.' The interaction approach will use a model similar to the primary analysis but will include a binary indicator for the subgroup and an interaction term between the subgroup indicator and the treatment allocation variable.

Results will be reported as effect sizes with corresponding 95% confidence intervals.

## **Analysis in the presence of non-compliance**

The WSS Review programme is a whole-school intervention, meaning compliance is determined at the school level. If a school is compliant, all its students are considered compliant. In discussions with EEF and nasen, it was agreed that schools attending the initial WSS Review training event would be classified as compliant, while those allocated to the intervention group that did not attend and had no further contact with the scheme would be classified as non-compliant. Developers could not rule out the possibility that attending this training alone might influence school practices and, in turn, student outcomes. The event, attended by SENDCos from 67 out of 72 intervention schools, lasted one day. The control group had no access to any aspect of the intervention, including training.

Although a broad definition of compliance, this approach ensured that compliance assumptions held. Therefore, statistical analysis accounting for non-compliance was deemed unnecessary and is not proposed.

## **Additional analyses and robustness checks**

We propose conducting additional analyses to estimate the intervention's impact on the pooled Year 8 and 9 SEND samples. Analysis will pool the sample including a Year group dummy which is interacted with the treatment dummy to test the null hypothesis that the effects in the two years are the same. This approach is set out assuming homogenous effects across year groups in the primary analysis.

Specifically, we propose the following models:

1. Pooled Year 8 and 9 SEND samples, GCSE English Grade, with treatment by year group interaction term and covariates
2. Pooled Year 8 and 9 all pupils samples, GCSE English Grade, with treatment by year group interaction term and covariates
3. Pooled Year 8 and 9 SEND samples, GCSE maths Grade, with treatment by year group interaction term and covariates
4. Pooled Year 8 and 9 all pupils samples, GCSE maths Grade, with treatment by year group interaction term and covariates

In addition, we seek to further examine results from the primary analysis. We will conduct further analyses to assess the impact of regression adjustments on sample estimates. This will be done for the primary analysis sample only (i.e. Year 8 SEND pupils looking at GCSE English grades). This will involve estimating four additional models:

5. Baseline variance components model: A linear regression model with random effects at the school and pupil levels, containing no covariates or intervention group indicator. This model will be used to examine the mean and variance of the primary outcome.
6. Unadjusted treatment effect model: A linear regression model with random effects at the school and pupil levels, including only the intervention group indicator. This will allow us to estimate the unadjusted difference in means and its confidence interval.

The unadjusted mean difference will aid transparency and interpretability, showing the raw treatment effect without adjustment. This complements the primary analysis, which follows EEF guidance and uses an adjusted mean difference.

7. Adjusted treatment effect model: A linear regression model with random effects at the school and pupil levels, including the intervention group indicator and additional covariates. Covariates will include those used in the primary regression model, as well as gender, ever-FSM status, month of birth, school-level FSM proportion, EAL status, SEND status, and school performance in KS4 national examinations. This model will assess the sensitivity of the primary analysis results to an expanded set of covariates.
8. Population-average treatment effect model: A linear regression model using ordinary least squares (OLS) with cluster-robust standard errors (HC2) and a degrees of freedom adjustment. This model provides a simpler way of estimating the average treatment effect across all pupils, without making the stronger assumptions of hierarchical models. The use of HC2 cluster-robust standard errors helps adjust for differences in variability between schools and can provide more reliable standard error estimates than basic OLS or simpler robust methods, especially when school sizes vary.

### **Missing data analysis**

The primary motivation for conducting these analyses were to obtain estimates of the effectiveness of WSS Review for the Year 8 cohort. It was felt that attempting to collect data direct from schools for this cohort would not be viable given the extent of missing data seen in the analysis of results from the Year 9 cohort, and reported in the main report (Lewin, et al, under review). We are however in the unusual position of being able to replicate some of the estimates in the main report for the Year 9 cohort, that were affected by substantial missingness, but using data collected for them from the NPD. These data are much less likely to be affected by non-response.

In the main project report, we set out results of analyses of the effects of WSS review on English and mathematics grades for SEND and all pupils in the Year 9 cohort. We can repeat this analysis here minus the consequences of the missing data plaguing those initial results. In comparing results of the two analyses, we can get a sense of how far missing data might have biased our original findings. This will be of interest in terms of the substantive questions addressed in this study but also of wider significance given the ubiquitous problem of loss to followed up that affects many education trials.

Furthermore, we can also assess how far strategies such as multiple imputation bring us closer to the unbiased results we will obtain from the Year 9 cohort in this study.

In the main report, the missing data analysis focused on the primary outcome (GCSE English marks) within the SEND subsample, limited to the Year 9 cohort. Multiple Imputation (MI) was used, adjusting statistical estimates under the assumption of Missing at Random (MAR). The results from the imputed datasets were broadly similar to those from the complete-case analysis, suggesting that while MAR processes were not entirely absent, they had minimal impact on our findings.

We cannot directly compare these ‘imputed’ results with estimates here because they were undertaken with GCSE marks (not grades) as the primary output. However, we can rerun the analysis of GCSE grade outcomes in the Year 9 data set from which results in the main report were derived but this time applying multiple imputation. We can then compare results for the Year 9 cohort on GCSE grade outcomes across: 1) those presented in the main report (suffering considerable from non-response) 2) those presented in the main report but subject to multiple imputation; and 3) those from the Year 9 cohort after linking to NPD records (suffering minimally from non-response).

If estimates from the complete dataset differ significantly from those based on imputed data, we will conduct further tests to examine whether missingness was related to the missing values themselves — i.e., whether the data were Missing Not at Random (MNAR). If MNAR is detected, this would suggest that attrition introduced bias into the original estimates, which would be important for interpreting the trial results.

A more detailed analysis plan will be provided in the Statistical Analysis Plan.

## **Implementation and process evaluation (IPE) design**

In the addendum analysis, we do not focus on the Implementation and Process Evaluation (IPE) of Whole School SEND, as a comprehensive IPE was already conducted during the original trial (Lewin et al, under review).

The ‘primary’ evaluation examined the implementation of action plans, changes to policy and practice, and, for comparative purposes, SEND provision in control schools. It explored various dimensions of implementation, including the reach and uptake of proposed developments, any adaptations made during implementation, and the associated costs (both fixed and variable). Fidelity was guided by the programme’s theory of change. For further details, please refer to the trial protocol (Morris et al., 2020).

## **Cost evaluation design**

Similarly, as with the IPE, cost evaluation was conducted in the main trial and is therefore not included in the addendum analysis. For further details, please refer to Morris et al. (2020).

## **Ethics and registration**

Ethical approval has been obtained through Manchester Metropolitan University. The original submission was made on 10<sup>th</sup> October 2019, and approval was granted following revisions on 31<sup>st</sup> October 2019. Further amendment in relation to the addendum analysis set out in this protocol was reviewed by the Research Ethics and Governance Committee and, on the 15/01/2025, was given a favourable ethical opinion. The approval is in place until 31/07/2026.

The process includes providing details about the project design, information about the ethical procedures that will be adopted, and copies of participant information sheets and

consent/withdrawal forms. We also included the Memorandum of Understanding and privacy notice.

This trial is registered at the ISRCTN registry, registration number ISRCTN11339306. The entry can be viewed here: <http://www.isrctn.com/ISRCTN11339306>

## Data protection

Manchester Met processes personal data of pupils and school staff for the purposes of this study and acted as evaluators. This processing is regulated by the General Data Protection Regulation (GDPR) and the Data Protection Act 2018 (DPA).

- Manchester Metropolitan University (Manchester Met) is a Data Controller in respect of personal data of pupils/and or teachers which they processed for the purposes of the project.
- The Education Endowment Foundation (EEF) will become the Data Controller at the end of the project once the data is submitted to the EEF Data Archive, currently managed by FFT Education (Data Processor for the archive).

Manchester Met ensures that all personal data collected and processed by Manchester Met for this research project are:

- Processed in a manner that was fair, transparent and lawful.
- Adequate and relevant to the study, and were processed solely for the purposes set out in this document and the trial protocol.
- Accurate, and where necessary, kept up to date.
- Kept in a form which permits identification of data subjects for no longer than was necessary.
- Processed in a manner that ensures appropriate security of the personal data.

This evaluation was assessed for data protection and ethics as part of the embedded research ethics approval process in place at Manchester Met. All personal data were treated with strictest confidence by the evaluators in accordance with the requirements of the GDPR 2018.

Manchester Met ensured that a data sharing agreement was in place as required by the GDPR and DPA.

Data was processed by Manchester Met to ascertain the impact of the intervention on the pupil outcomes, and to make judgements about compliance and fidelity. So that the processing of personal data relating to the pupils was fair, lawful and transparent, pupils' parents received: a parent information sheet, parental withdrawal form, and a privacy notice agreed with the University's Data Protection Officer.

Pupils also received information about the SDQ prior to its completion and were given the opportunity to withdraw. Pupils were also able to withdraw from data processing at any time during the study.

As a public authority conducting research and analysis in the public interest which has undergone ethical approval the lawful basis for the processing of:

- Personal data is 'Public Task' – GDPR Article 6(1)(e);
- Personal data defined as special category is 'Research purposes in the public interest' – GDPR Article 9(2)(j).

Any information identifying students was given a unique code immediately after collection and prior to analysis in order to reduce risk. Archived data will include pupil UPNs and matching to the NPD and other administrative data may take place by the Data Archive Manager. However, data will only be released subsequently to interested parties in an anonymised format. The information collected was used for research purposes only and no information that can identify individuals was used for any other purpose.

## Personnel

**Principal Investigator: Sandor Gellen, Policy and Evaluation Research Unit, Manchester Metropolitan University:** Sandor is a Research Associate with expertise in evaluating programmes using quantitative and small-n mixed methodologies. Sandor has played a major role in several recent EEF trials, including PALS-UK, WSS Review, Reading Plus and PSQM. Sandor will lead the project in terms of design, data collection, analysis and the production of final outputs.

**Co-investigator: Professor Steve Morris, Policy and Evaluation Research Unit, Manchester Metropolitan University:** Steve Morris is a Professor of Evaluation. He specialises in experimental/quasi-experimental evaluation designs. Steve will provide expert advice and guidance on designing the trial, data collection and analysis and will quality assure the statistical analysis. Steve will oversee the design and analysis process.

**Professor Cathy Lewin, Education and Social Research Institute, Metropolitan University:** Cathy Lewin is a Professor of Education. She has extensive experience of mixed-method evaluation of school-based interventions, including educational technology and inclusive education. She will contribute to the final outputs and will be responsible for data governance.

**Dr Will Cook, Policy and Evaluation Research Unit, Manchester Metropolitan University:** Will Cook is a Reader in Policy Evaluation (Co-PI and impact evaluation lead). Will specialises in quasi-experimental impact evaluation and has conducted several studies of the effects of teaching programmes on pupil attainment using the NPD.

## Risks

There are no substantial risks related to the addendum analysis outlined in this protocol, as the intervention has already been completed. Any risks associated with the trial delivery and its evaluation activities are detailed in the original protocol (Morris et al, 2020).

## Timeline

Table 4: Timeline

Dates	Activity	Staff responsible/leading
Nov 2024	Start-up meetings	MMU, EEF
Dec 2024 – Apr 2025	Data governance (NPD application; internal MMU processes)	MMU
Jan – Aug 2025	Protocol and SAP amendment	MMU

May – Jun 2025	Data collection, linking, cleaning and structuring	MMU
Jul – Sep 2025	Analysis within the ONS SRS	MMU
Sep – Nov 2025	Reporting	MMU

## References

- Ainscow, M., Booth, T., & Dyson, A. (2006). *Improving schools, developing inclusion*. Routledge.
- Booth, T., & Ainscow, M. (2002). *Index for inclusion: Developing learning and participation in schools*. ERIC.
- Bunter, D. (2018). *An Evaluation of Contract Delivery of The Department for Education School Workforce Contract, 2016-2018: Whole School Send and the Community of Practice*. London: Department for Education.
- Curran, H., Moloney, H., Heavey, A., & Boddison, A. (2018). *It's about time: The impact of SENCO workload on the professional and the school*.
- Curran, H., Moloney, H., Heavey, A., & Boddison, A. (2020). *The time is now: Addressing missed opportunities for Special Educational Needs Support and Coordination in our schools*.
- Department for Education. (2015). *Special educational needs and disability code of practice: 0 to 25 years*. London: Department for Education. Retrieved from: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/398815/SEND\\_Code\\_of\\_Practice\\_January\\_2015.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/398815/SEND_Code_of_Practice_January_2015.pdf)
- Department for Education. (2019a). *Timpson Review of School Exclusion*. London: Department for Education.
- Department for Education. (2019b). *Special educational needs in England: January 2019*. London: Department for Education. Retrieved from: [https://assets.publishing.service.gov.uk/media/5d1c91cce5274a08df3d35bd/SEN\\_2019\\_Text.docx.pdf](https://assets.publishing.service.gov.uk/media/5d1c91cce5274a08df3d35bd/SEN_2019_Text.docx.pdf)
- Department for Education (2024a). *Special educational needs in England, Academic year 2023/24*. London: Department for Education. Retrieved from: <https://explore-education-statistics.service.gov.uk/find-statistics/special-educational-needs-in-england>
- Department for Education (2024b). *Academic year 2022/23: Suspensions and permanent exclusions in England*. London: Department for Education. Retrieved from: <https://explore-education-statistics.service.gov.uk/find-statistics/suspensions-and-permanent-exclusions-in-england>
- Donath, J.L., Lüke, T., Graf, E. et al. (2023). Does Professional Development Effectively Support the Implementation of Inclusive Education? A Meta-Analysis. *Educ Psychol Rev* 35, 30. Retrieved from: <https://doi.org/10.1007/s10648-023-09752-2>
- Dong, N., & Maynard, R. (2013). PowerUp!: A tool for calculating minimum detectable effect sizes and minimum required sample sizes for experimental and quasi-experimental design studies. *Journal of Research on Educational Effectiveness*, 6(1), 24-67.
- Florian, L., Rouse, M., & Black-Hawkins, K. (2016). *Achievement and inclusion in schools*. Routledge.
- Florian, L., & Spratt, J. (2013). Enacting inclusion: A framework for interrogating inclusive practice. *European Journal of Special Needs Education*, 28(2), 119–135.
- Ginnis, S., Pestell, G., Mason, E., & Knibbs, S. (2018). *Newly qualified teachers: annual survey 2017*. London: Department for Education. Retrieved from

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/738037/NQT\\_2017\\_survey.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738037/NQT_2017_survey.pdf)

- Hedges, L. V. (2007). Effect Sizes in Cluster-Randomized Designs. *Journal of Educational and Behavioral Statistics*, 32(4), 341–370. <https://doi.org/10.3102/1076998606298043>
- Hick, P., & Thomas, G. (2008). *Inclusion and diversity in education*. Sage.
- Hutchinson, J. (2021) Identifying pupils with special educational needs and disabilities. Education Policy Institute. <https://epi.org.uk/publications-and-research/identifying-send/>
- Lewin, C., Morris, S., Wicker, K., Krzemieniewska-Nandwani, K., Gellen, S., and Hick, P., (under review) *Evaluation of the Whole School SEND Review programme: A cluster randomised controlled trial – Evaluation report*, London: Education Endowment Foundation
- Lewis, A., & Norwich, B. (2004). *Special teaching for special children? Pedagogies for inclusion: A pedagogy for inclusion?* McGraw-Hill Education (UK).
- Morris, S., Lewin, C., Hick, P., Smith, A., and Harrison J. (2020) *Evaluation of WSS Review: A cluster randomised controlled trial – Evaluation protocol*, London: Education Endowment Foundation [https://d2tic4wvo1iusb.cloudfront.net/production/documents/projects/EEF\\_Whole\\_School\\_SEND\\_Protocol\\_-\\_Amended.pdf?v=1742467900](https://d2tic4wvo1iusb.cloudfront.net/production/documents/projects/EEF_Whole_School_SEND_Protocol_-_Amended.pdf?v=1742467900)
- Ofsted/CQC. (2017). *Local area SEND inspections: one year on October 2017*. Manchester: Ofsted.
- Pearson, S., Mitchell, R., & Rapti, M. (2015). ‘I will be “fighting” even more for pupils with SEN’: SENCOs’ role predictions in the changing English policy context. *Journal of Research in Special Educational Needs*, 15(1), 48–56.
- Wall, K., Van Herwegen, J., Shaw, A., Russell, A., & Roberts, A. (2019). *A Study of the Drivers, Demand and Supply for Special Educational Needs and/or Disabilities (SEND)-Related Continuing Professional Development (CPD) for School Staff*. London: UCL, Institute of Education.