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The academic achievement gap between students with and without special educational needs and disabilities

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ABSTRACT

Legislative frameworks in England have been designed to support children with special educational needs and disabilities (SEND). Despite efforts from policy makers, achievement gaps persist between students with SEND and their typically developing peers. This study examines the extent and persistence of academic achievement gaps between students with various SEND classifications and their peers. Utilising data from the National Pupil Database, a comprehensive analysis of approximately 2.5 million Year 6 students across four academic years was conducted. The analysis focused on reading, mathematics, and writing achievements, exploring variations by SEND type and assessing changes over time. The findings revealed substantial, persistent gaps across all examined subjects, with the largest discrepancies noted in students with intellectual disabilities. Although some variability was observed based on the type of SEND, all students with SEND performed, on average, below their peers, with gaps widening over the examined period. The results underscore the need for a critical re-evaluation of educational practices and policies intended to support students with SEND.

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In England, the Children and Families Act (DfE 2014) and the Special Educational Needs and Disability (SEND) Code of Practice (Department for Education and Department of Health 2015) are two interconnected legislative frameworks that aim to support children and young people with SEND. The Children and Families Act (DfE 2014) introduced reforms to the education systems supporting children and young people with SEND. It sets out a legal framework for how children with SEND should be supported, including their education and healthcare needs. The SEND Code of Practice (DfE 2015) is statutory guidance issued under the Children and Families Act (2014) which provides practical advice for local authorities, schools, health care, and social care professionals on how to implement the provisions of the Act effectively. Both the Children and Families Act (DfE 2014) and the SEND Code of Practice (DfE 2015) build on the foundational principles set forth by the Warnock Committee in 1978 (Department for Education and Science 1978), emphasising the importance of inclusive education, early identification, and high-quality provisions to support the diverse needs of students with SEND.

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Of importance is the academic achievement of students with SEND, as it is a key indicator of the effectiveness of these legislative frameworks. While the existence of an academic achievement gap between students with and without SEND is well-documented (e.g. Gilmour, Fuchs, and Wehby 2019), the dynamic nature of this gap – how it has shifted over time, across different SEND categories, and in response to policy interventions like the Children and Families Act and SEND Code of Practice – remains less understood. Given the statutory guidance aimed at enhancing academic outcomes and broader well-being for students with SEND, this study aimed at conducting a comprehensive, large-scale analysis of the academic achievement trends among students with various SEND classifications in England across four cohorts of Year 6 students. By examining the academic trajectories of students with SEND in relation to their peers, this analysis contributes to the ongoing dialogue on effective support mechanisms within the framework of recent educational policies in England.

The academic achievement gap

In the 2021/22 academic year, notable differences in educational outcomes were reported between Year 6 students with and without SEND in England. For instance, only 18% of students with SEND met the expected standards in reading, writing, and mathematics, compared to 69% of their peers without SEND (Department for Education 2023). A critical issue in interpreting the achievement gap between students with SEND and their non-SEND peers lies in the aggregation of all students with SEND into a single category. Such aggregation potentially obscures the academic performance variations among students receiving different SEND services. For instance, in the US, X. Wei, Blackorby, and Schiller (2011) conducted a longitudinal study on a representative sample of students with SEND. Authors reported that students with specific learning difficulties demonstrated significantly lower reading achievement than peers with speech language and communication needs, socio-emotional mental health needs, visual impairments, and autism spectrum disorder. In contrast, their performance notably exceeded that of students with intellectual disabilities[1] or multiple disabilities. In a subsequent analysis (X. Wei, Lenz, and Blackorby 2013), focusing on mathematics achievement among students with SEND, findings suggested that, apart from students with speech language and communication needs, socio-emotional mental health needs, and visual impairments, those classified under other disability categories demonstrated significantly lower maths achievement compared to their peers with specific learning difficulties. Therefore, while the aggregate data might suggest a narrower achievement gap for students with SEND when viewed collectively, a closer examination by distinct SEND categories reveals more variable levels of disparity, underscoring the importance of nuanced analysis to fully understand the educational challenges faced by students under the SEND umbrella.

There are additionally three further issues in comprehending the academic achievement gap between students with and without SEND. The first is that a large majority of international literature on academic achievement gaps predominantly focuses on the reading achievement gap (e.g. Catts et al. 2008; Gilmour, Fuchs, and Wehby 2019; Judge and Watson 2011; Peng et al. 2017; Ratz and Lenhard 2013; Schulte et al. 2016; Sullivan et al. 2017). In contrast, few studies have explored the academic achievement gap for students with SEND in maths (Schnepel et al. 2020; Schulte and Stevens 2015;

X. Wei, Lenz, and Blackorby 2013) or writing (Bakken et al. 2021). Only one meta-analysis was found that reported on the writing achievement gap between students with and without SEND (Graham, Collins, and Rigby-Wills 2017). Notably, the Graham, Collins, and Rigby-Wills (2017) meta-analysis only reported on the writing achievement gap between students with specific learning difficulties compared to their typical peers. This leads to the second issue which is that a majority of international literature on the academic achievement gap predominantly focuses on differences between students with specific learning difficulties and their typical peers (e.g. Duff et al. 2023; Ferrer et al. 2015; Francis et al. 1996; Jacobson 1999; Judge & Bell, 2010; Judge and Watson 2011; Mattison et al. 2023; Morgan, Farkas, and Wu 2011; Peng et al. 2017; Sullivan et al. 2017). Few studies have explored achievement gaps between other SEND categories such as speech language and communication needs (Morgan, Farkas, and Wu 2011), hearing impairments (Cawthon et al. 2023), socio-emotional and mental health needs (Nelson et al. 2004), autism spectrum disorder (Di Blasi et al. 2019; S. H. Kim, Bal, and Lord 2018; T. Wei, Liu, and Barnard-Brak 2015), and intellectual disabilities (Afacan and Wilkerson 2022; Bakken et al. 2021).

Lastly, a significant limitation is the scarcity of research specifically examining the reading, mathematics, and writing achievement gap between students with various SEND classifications and their typical peers in England. This is particularly important as identification methods, academic services, and assessments used to measure outcomes can vary significantly from country to country, meaning that findings from past studies in other contexts may not be directly applicable to England. This underscores the importance of the current study in addressing a critical area of inquiry within the specific English educational context.

Study purpose and research questions

The purpose of this study was to examine the academic achievement gap between four cohorts of Year 6 students with and without SEND. Furthermore, the goal was to explore if differences in achievement gap varied between typical students and students with different identified SEND and if these differences were consistent over a period of four academic years. The analyses were restricted to data collected on or after the passing of the Child and Families Act (DfE 2014) and prior to the start of the COVID-19 pandemic. The reason for not including data post 2020 was that several studies have reported significant learning loss for students with SEND due to school closures and the unprecedented disruptions caused by the COVID-19 pandemic (Baschenis et al. 2021; Fuchs et al. 2023; Skipp et al. 2021), which could skew the long-term trends and comparisons intended in this study. The current study utilises data from 2014–15 to 2018–19 academic years to answer the following research questions:

(1) What is the average reading, maths, and writing gap between students with and without SEND?
(2) To what extent does the achievement gap in reading, maths, and writing vary by the type of students' SEND identification?
(3) Do differences in achievement between students with SEND and their typically developing peers persist over time?

Method

Data source

The present study used data from the National Pupil Database (NPD) which is a detailed administrative dataset maintained by the Department for Education, serving as a comprehensive source of student performance data. The NPD annually gathers individual and institutional information on students attending public schools in England. For the purpose of this study, data from 2015–16 to the 2018–19 academic years were analysed. This timeframe allows for the examination of student cohorts with varying degrees of exposure to policy reforms introduced in the Child and Families Act 2014, while avoiding the potential confounding effects of the COVID-19 pandemic, which began significantly impacting educational outcomes in 2020. The analyses included four cohorts of students enrolled in Year 6 (i.e. Grade 6) of their studies in schools across England. The study reports findings on data analysed for approximately 2.5 million Year 6 students across four academic years and includes data on approximately 360,000 students with SEND (see Table 1).

Variables of interest

Identified area of need

The primary variable of interest in the NPD was the categorical item that defines a students' primary SEND. Students are categorised into 13 different categories for which they receive services. For analyses, some of these SEND categories in the NPD were combined. Given the small sample, I combined students identified with profound and multiple learning/intellectual disabilities and students identified with severe learning/intellectual disabilities into intellectual disabilities. I also combined other smaller subgroups in the dataset which were physical disabilities, multisensory impairments, and NSA (i.e. students who receive some SEND support but have not received a formal diagnosis) into 'other'.

Table 1. Year 6 Student sample in England across four academic years.

SEND Type	2015-16	2016-17	2017-18	2018-19	Total
Non-SEND	510246	522741	539519	533179	2105685
ASD	7914	8657	9581	11013	37165
SEMH*	–	–	–	22794	22794
HI	1594	1598	1734	1876	6802
ID	3162	3053	3185	3287	12687
MLD	31396	29864	29336	28938	119534
OTHER	7246	7439	7685	12598	34968
SLCN	13889	14559	16078	18052	62578
SPLD	15940	15716	16025	16468	64149
VI	883	940	1005	1040	3868
Total	592270*	604567*	624148*	649245	2470230

ASD = Autism spectrum disorder; HI = Hearing impairment; ID = Severe and Profound intellectual disabilities; MLD = Moderate intellectual disabilities; Non-SEND = Typical students; SEMH = Socio-emotional mental health needs; SLCN = Speech, language, and communication needs; SpLD = Specific learning difficulties/disabilities; VI = Visual impairments..

*Data on students with SEMH needs was not available prior to 2018/19 and total does not include this student population from 2016–16 to 2017–18.

Academic test scores

All students in England at the end of their Year 6 are assessed on their reading, maths, and grammar, punctuation, and spelling (GPS; Writing) skills. These assessments are administered in educational settings over a 4-day period. On day 1, students are assessed on two GPS or writing assessments. The GPS test, divided into grammar, punctuation, and spelling (Paper 1, 45 minutes, 50 marks) and a spelling-only section (Paper 2, around 15 minutes, 20 marks), evaluates students on elements of the taught curriculum. On day 2, students take the reading assessment. The reading test (60 minutes, 50 marks) assesses comprehension through increasingly difficult texts. On day three, students are assessed on one arithmetic and one maths reasoning assessment. Finally on day four, students are assessed on another maths reasoning test. The mathematics assessments include an arithmetic paper (30 minutes, 40 marks) and two papers on maths fluency, problem-solving, and reasoning (40 minutes each, 35 marks per paper).

The raw assessment scores are then converted to scaled scores to provide a consistent way to report national curriculum test results year over year. The conversion from a pupil's raw score – the total marks earned for correct answers – to a scaled score is done through a conversion table and ranges from a scaled score to 80 to 120 (see Standards & Testing Agency 2016). For this study, students' scaled scores were used for all analyses.

Data analyses

The research focused on identifying the magnitude of the academic achievement gap in reading, maths, and writing (i.e. GPS) between students with and without SEND. Utilising descriptive statistics, the research quantified average performance discrepancies and standardised mean differences (Cohen's *d*) to measure the magnitude of these gaps across various disability categories and over different time periods. This approach allowed for an understanding of how achievement gaps vary by SEND type and whether disparities persist or change over time. All analyses were conducted using R (R Core Team 2021). See Appendix A for descriptive statistics on each academic outcome for each cohort.

To provide a clearer understanding of the research outcomes, this analysis includes a measure of the achievement gap, expressed in the number of years by which students with SEND lag behind their typically developing peers in reading, maths, and writing skills. After calculating the magnitude of difference between the two groups using Cohen's d (a standardised effect size), this value is then divided by the estimated annual growth rate to determine the gap in years of academic progress. Previous research has generally estimated the annual academic growth at around 0.3 standard deviations (see Gilmour, Fuchs, and Wehby 2019; Wiliam 2007), with these figures primarily drawn from US-based studies. However, these estimates may not accurately reflect the growth rate of students in England. In contrast, Higgins, Kokotsaki, and Coe (2011), utilising data from assessments and student cohorts within England, suggests a higher annual academic growth rate of approximately 0.7 standard deviations for Year 6 students. Given that the current study focuses on students in England, the calculation of how far behind students with SEND are from their typically developing peers is

based on this 0.7 standard deviation annual growth rate. For example, if students with SEND score 0.7 standard deviations lower in reading than their typically developing peers, this would suggest they are approximately one year behind.

Results

What is the average reading, math, and writing gap between students with and without special educational needs?

As shown in Figure 1, the average achievement gap between Year 6 students with and without SEND ranged from an effect size of 1.07 – 1.33. Notably, the largest achievement gap was observed in writing skills across the four academic years ranging from an effect size of 1.32 in 2015–16 to 1.29 in 2018–19 academic year. The achievement gap in reading remained almost constant across the four years with an effect size of 1.07 in 2015–16 to 1.09 in 2018–19. However, the achievement gap in maths seemed to widen over the years with the magnitude of difference being 1.11 in 2015–16 and consistently widening to 1.21 in 2018–19.

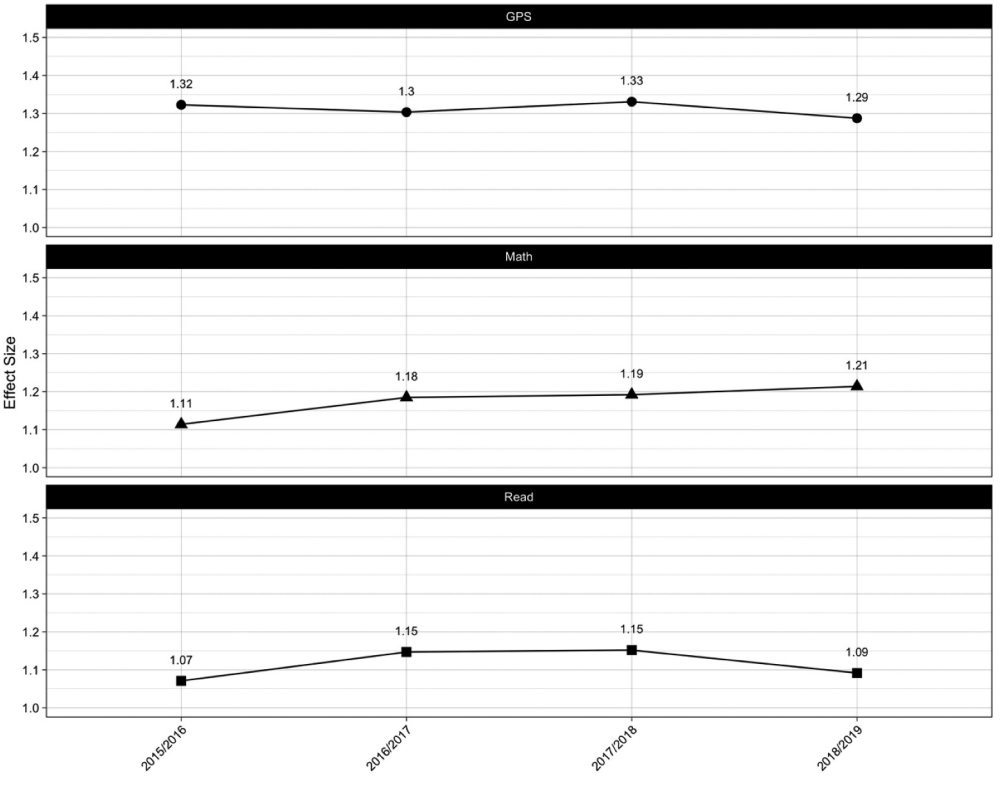

Figure 1. Magnitude of difference between typical students and students with SEND in writing, math, and reading skills. GPS: Grammar, punctuation, and spelling (Writing).

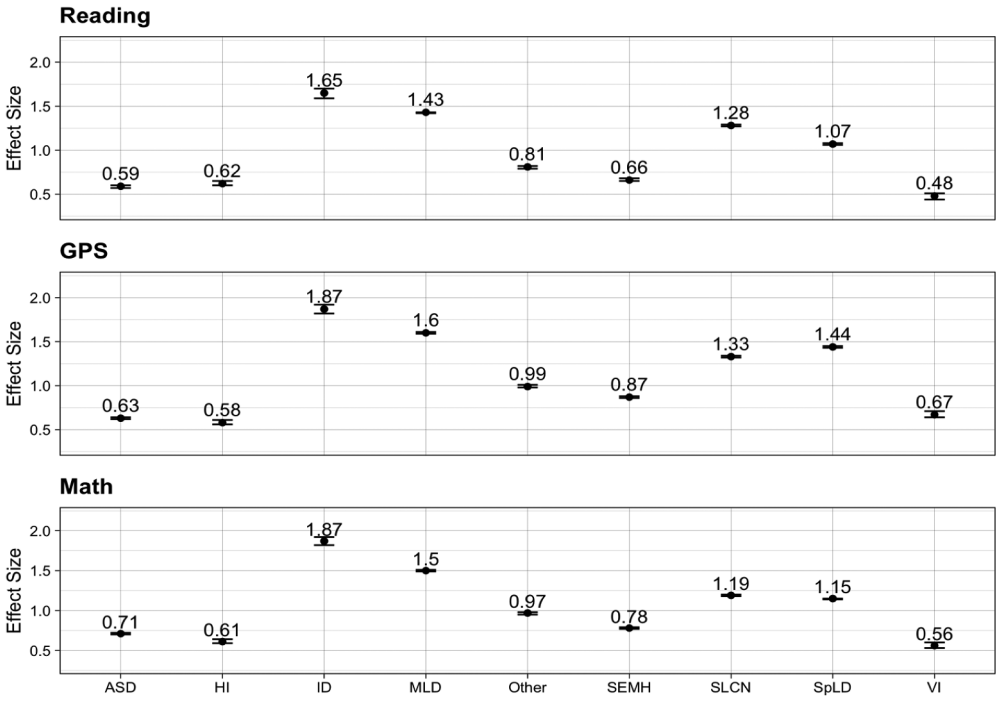

Figure 2. Magnitude of difference between typical students and students with different SEND in reading, writing, and math skills across four cohorts of year 6 students 2015–16 to 2018–19) academic years. GPS: Grammar, punctuation, and spelling (Writing); ASD = Autism spectrum disorder; HI = Hearing impairment; ID = Severe and Profound intellectual disabilities; MLD = Moderate intellectual disabilities; SEMH = Socio-emotional mental health needs; SLCN = Speech, language, and communication needs; SpLD = Specific learning difficulties/disabilities; VI = Visual impairments.

To what extent does the achievement gap in reading, math, and writing vary by the type of SEND?

Figure 2 demonstrates the achievement gap between four cohorts of Year 6 students from 2015–2016 to 2018–19 academic years.

Reading

In reading, both students with profound and severe intellectual disabilities and those with moderate intellectual disabilities are observed to exhibit the largest achievement gap, with effect sizes of 1.65 and 1.43 respectively, suggesting a delay in reading proficiency by more than two academic years relative to their typically developing peers. Students with speech, language, and communication needs and those with specific learning difficulties also display substantial reading achievement gaps with effect sizes of 1.43 and 1.28, respectively, which translates to reading skills that are 1.5 to 1.8 years behind their typically developing peers. Conversely, the smallest reading achievement gaps were observed for students with autism spectrum disorders and visual impairments, with effect sizes of 0.59 and 0.48, respectively, which indicates relatively smaller discrepancies in reading performance.

Writing

The achievement gap in writing follows a similar pattern to reading, where students with intellectual disabilities, speech, language, and communication needs, and those with specific learning difficulties present the most significant gaps. While students with profound intellectual disabilities on average performed 2.6 years behind typical peers ($d = 1.87$), students with speech, language, and communication needs ($d = 1.33$), and those with specific learning difficulties ($d = 1.44$) on average demonstrate an almost two-year gap in writing skills compared to typical peers.

Math

The maths achievement gaps are also prominent among students with profound and severe intellectual disabilities ($d = 1.87$), indicating an average achievement gap of approximately 2.6 years. When considering maths development, almost all SEND subgroups on average demonstrate large achievement gaps compared to reading except for students with hearing impairment ($d = 0.61$) and speech, language, and communication needs ($d = 1.19$).

Overall, the effect sizes across reading, writing, and maths indicate that the type of SEND greatly influences the extent of the academic achievement gap. The results demonstrate that students with intellectual disabilities consistently show the largest achievement gap across all three academic domains. In contrast, students with hearing impairments, visual impairments and autism spectrum disorders tend to demonstrate comparatively smaller academic achievement gaps.

Do differences in achievement between students with SEND and their typical peers persist for time?

Achievement gap increasing over time

In examining the data in Figure 3, there is evidence of a widening of the achievement gap over time for most SEND categories across the three academic domains. Particularly, students with profound, multiple, and moderate intellectual disabilities show a concerning trend where the gap in reading, writing and maths is widening. Similar increase in the widening of the achievement gap is observed for students with specific learning difficulties across reading, writing, and maths skills. The uptick in effect sizes indicates that these students are falling progressively further behind their peers in all three core academic skill areas.

Achievement gap mostly stable over time

Conversely, the gap appears mostly stable for some student populations in some academic domains. For instance, in writing, students with autism spectrum disorder and students with speech, language and communication needs demonstrate minimal variation across the four cohorts. Similarly, in reading, different cohorts of students with hearing impairments and those with speech, language and communication needs perform at relatively similar levels across the four-academic years. In contrast, in maths, except for students with visual impairment, all other SEND categories demonstrate a gradual widening of the maths achievement gap.

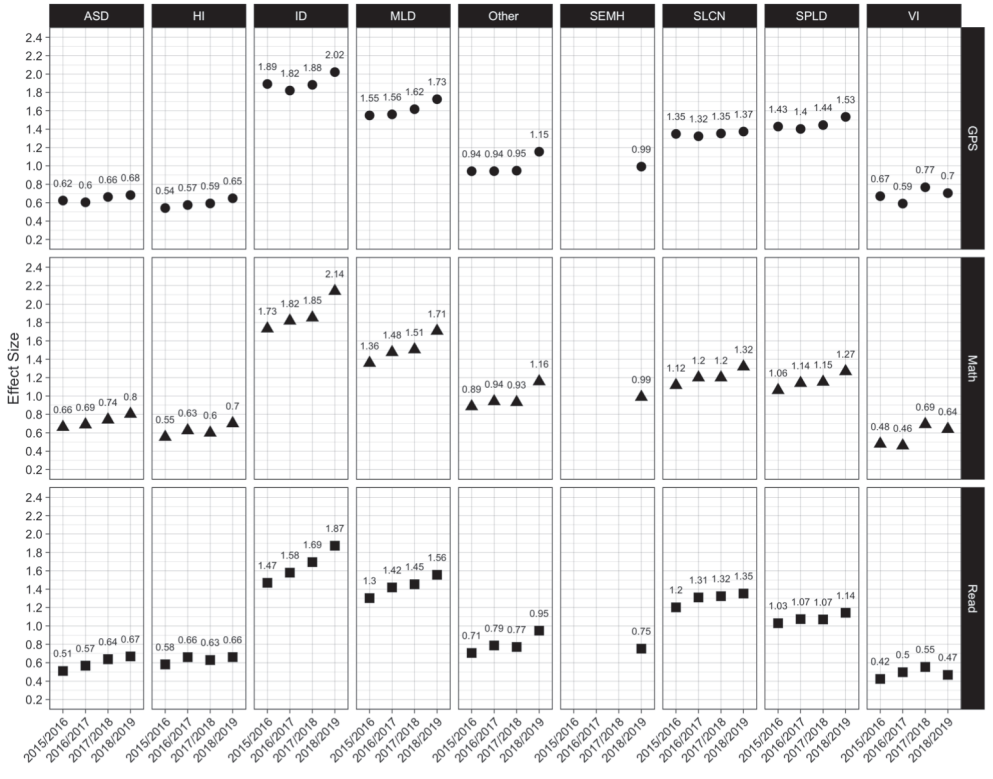

Figure 3. Magnitude of difference between typical students and students with different SEND from 2015–16 to 2018–19 in writing, math, and reading skills. GPS = Grammar, punctuation, and spelling (Writing); ASD = Autism spectrum disorder; HI = Hearing impairment; ID = Severe and Profound intellectual disabilities; MLD = Moderate intellectual disabilities; SEMH = Socio-emotional mental health needs; SLCN = Speech, language, and communication needs; SpLD = Specific learning difficulties/disabilities; VI = Visual impairments. Data for students with SEMH was only available for 2018–19 academic year.

Achievement gap declining over time

Although less common, there are instances where the achievement gap appears to be declining. For instance, compared to the 2017–18 academic year, in 2018–2019, students with visual impairments demonstrated a marginal decline in the achievement gap in reading (−0.08), maths (−0.05), and writing (−0.07). While these attenuation in achievement gaps are modest, on average, they suggest an improvement in the relative achievement of this student population over time, given the stable academic scores for the non-SEND Year 6 student population as shown in Appendix A.

Discussion

This is the first study in England that utilises the NPD to provide a comprehensive overview of the achievement gap across reading, mathematics, and writing among Year 6 students

with various types of SEND. The findings from this study show persistent and in many cases, an increasing academic achievement gap between students with and without SEND.

Observation of similarities and differences in academic performance of students with SEND in England and international studies

Given the limited research on academic achievement gaps for students with different SEND in England, it is prudent to compare this study's findings to past international research in this area with some caution. It is important to acknowledge that such comparisons may be limited, given the diverse methodologies, SEND identification guidelines and procedures used across studies in different geographic locations.

A recurrent theme identified within both previous literature and the findings of the present investigation is the observation that students with intellectual disabilities manifest the lowest academic achievement in comparison to their peers across the domains of reading and mathematics (Bakken et al. 2021; Di Blasi et al. 2019; Gilmour, Fuchs, and Wehby 2019; Ratz and Lenhard 2013; X. Wei, Blackorby, and Schiller 2011, 2013). Concurrently, aligning with findings from prior research, this study too observes that students with visual impairments constitute a distinctive subgroup within the SEND population that consistently outperforms other SEND categories on academic skill assessments (Gilmour, Fuchs, and Wehby 2019; X. Wei, Blackorby, and Schiller 2011, 2013).

Furthermore, there also exist notable discrepancies. For instance, while the analysis by Gilmour, Fuchs, and Wehby (2019) showed students with speech, language, and communication needs performing 0.60 standard deviations below their typical peers in reading, the present study observed this student population performing 1.28 standard deviations below their typical peers, presenting a disparity nearly double that reported in their US counterparts. Similarly, while global analyses (Graham, Collins, and Rigby-Wills 2017) suggest students with specific learning difficulties perform approximately one standard deviation below their typical peers in writing skill assessments, data from the NPD suggest that these students exhibited writing skills approximately 1.5 standard deviations behind their typical peers, indicating a more pronounced achievement gap in writing for pupils with specific learning difficulties in England.

While these comparative observations provide insights, it is crucial to acknowledge that the studies being compared utilised a broad spectrum of student samples in terms of age groups, methodologies for SEND identification (e.g. Daniel, Clucas, and Wang 2024), and a diversity of assessment techniques. These comparisons are presented as observations and ought to be interpreted cautiously, given the potential for substantial variability in the samples and methodologies employed across different studies.

The academic achievement gap in the England

The findings reveal persistent achievement gaps across reading, maths, and writing for students with SEND. The analyses demonstrate that across four academic years, on average, all students with SEND, across all three subject areas, are performing below their typically developing peers. On average in 2018–19, students with SEND were performing almost 2 years behind in writing skills, 1.7 years behind in maths skills, and 1.5 years behind in reading skills compared to their typical peers.

The analysis suggests that, on average, there is a concerning trend of increasing academic achievement gaps over time for most SEND categories. Even for students who demonstrate achievement gaps that are less than one year (i.e. students with hearing impairments, visual impairments, and autism spectrum disorder), the gap seems to be gradually widening as the magnitude of difference is slightly larger in 2018–2019 compared to 2014–2015 across reading, maths, and writing. This widening gap over the years suggests that current educational strategies may not be effectively addressing the learning needs of these students, leading to their progressive lag with peers in academic achievement. Furthermore, it suggests that the aims of policy such as the Children and Families Act (DfE 2014) and the SEND Code of Practice (DfE 2015) are not completely successful in improving the academic outcomes for pupils with SEND.

It is important to highlight that for most SEND subgroups, on average, students' performance is lowest in writing compared to reading and maths. Past researchers have criticised the quality of writing instruction for pupils with SEND and suggested that students are not afforded the necessary instruction in developing their writing skills (Esposito, Herbert, and Sumner 2023; Graham 2019). For instance, a recent survey of primary school teachers in England revealed that, among various age groups, those instructing Year 5 and 6 students were most likely to report not explicitly teaching spelling, in contrast to teachers of Year 1 to 4 students. Additionally, a notable percentage of teachers across all year groups admitted to *not* conducting spelling tests to assess students' learning (Esposito, Herbert, and Sumner 2023). In another study, nearly half of the participating teachers in England reported difficulties in instructing struggling writers; however, those who had undergone professional development were less likely to perceive supporting such students as problematic (Dockrell, Marshall, and Wyse 2016).

Furthermore, previous studies have critiqued the support mechanisms provided to students with SEND, highlighting the challenges of individualised attention from teaching assistants as a primary form of support. In England, past studies report that students with SEND spend a considerable amount of their time in schools working with teaching assistants (Webster 2014; Webster and de Boer 2021). However, evidence from reports indicate that teaching assistants do not receive adequate training to implement high quality interventions to support the academic growth of students with SEND (Carroll et al. 2020; L. Kim and Crellin 2023; Ofsted 2021; Sharples, Webster, and Blatchford 2015). Furthermore, there is some evidence to suggest a negative effect of working with teaching assistants on students' learning (Farrell et al. 2010; Webster 2014). Investigations reveal that teaching assistants frequently find themselves in roles requiring much more than mere support, without adequate professional development which can result in diminished educational quality (Ofsted 2021).

Additionally, a recent survey (Warnes, Done, and Knowler 2022) in England emphasised that classroom teachers, when discussing inclusive practices for students with SEND, expressed a significant need for increased funding to secure specialist and support staff, as well as educational resources and appropriate infrastructure that would enhance their ability to effectively support pupils with SEND. The findings further suggested that there is a risk of students with SEND being perceived as an added burden to the already challenging responsibilities of mainstream teaching. Other studies in England corroborate these claims where studies have documented lack of quality instruction, inadequate financial support, and pronounced need for professional development among teachers (Azpitarte

and Holt 2024; Boyle, Topping, and Jindal-Snape 2013; Robinson 2017). Thus, a variety of different factors could be associated with children with SEND failing to meet expected learning standards.

Implications for policy and practice

The observed achievement gaps and their dynamics over time have profound implications for educational practice and policy. Firstly, the persistent and, in most cases, widening achievement gaps call for a re-evaluation of the current approaches to supporting students with SEND. Policy implications also emerge from the analysis, particularly in relation to accountability frameworks and the allocation of resources. The findings advocate for increased investment in special education research and the development of innovative instructional methods that can more effectively meet the needs of students with SEND. There is clear need to develop resources that are easily accessible to educators as the lack of evidence-based resources hamper educators' ability to provide quality instruction (Dockrell, Marshall, and Wyse 2016; Esposito, Herbert, and Sumner 2023). Additionally, funding for regular professional development is needed to ensure that teachers and teaching assistants are using current research recommended practices to support students with SEND and that these methods align with students' specific areas and severity of needs. According to OfSted (2024), many experienced and part-time teachers report that they still do not receive high-quality professional development opportunities. Addressing this gap is critical for enhancing the effectiveness of SEND support strategies.

Limitations and conclusion

A significant limitation of this study lies in its inability to elucidate the underlying causes of persistent achievement gaps. Although previous research might suggest that these disparities continue due to the quality of educational support provided to students and their teachers (e.g. Webster and Blatchford 2014), this study is unable to establish a direct association between these factors. Another limitation is the heterogeneity within each SEND category, as students exhibit a broad spectrum of characteristics. This study merely underscores the achievement gap for each category without delving into the specific needs of subgroups, such as those within the specific learning difficulties category who may have varying challenges in reading, writing, and maths. Or for students who may have secondary need, such as those who are on the autism spectrum may also have intellectual disabilities or other additional needs (e.g. Di Blasi et al. 2023). Additionally, the combination of profound and multiple learning/intellectual disabilities and severe learning/intellectual disabilities into a single 'intellectual disabilities' category potentially masks some nuanced differences in achievement within this broader group of individuals. Lastly, the utilisation of a composite measure for reading, writing, and maths skills precluded the examination of the development of distinct abilities within these academic domains.

Future research should aim to unravel the underlying causes of the observed achievement gaps and to identify effective interventions and instructional practices that can support the academic development of students with SEND. Longitudinal studies

exploring the long-term effects of specific educational interventions on the achievement of students with SEND would be particularly valuable. Moreover, research into the role of factors such as teacher training, instructional quality, teacher expectations, and the implementation fidelity of evidence-based practices could offer critical insights into the mechanisms through which educational outcomes for students with SEND can be improved.

In conclusion, this analysis illuminates a complex achievement gaps faced by students with SEND across reading, mathematics, and writing. The findings highlight the urgent need for targeted, evidence-based interventions and a re-evaluation of educational policies to better support the learning and development of these students. By addressing these gaps, educators and policymakers can work towards a more inclusive and equitable educational system that meets the needs of all learners.

Note

1. In this paper, the term 'intellectual disabilities' is utilised to describe students referred to in England as having 'moderate, severe, or profound and multiple learning disabilities'. This choice is informed by a need to align with the terminology more widely recognised on an international scale. To ensure clarity and avoid confusion for an international audience, this paper adopts the term 'intellectual disabilities' to refer to this specific student population.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

Data are available by requests from the Office of National Statistics in England, Department of Education, released 30 March 2023, ONS Secure Research Service, dataset, Bespoke National Pupil Database extract.

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Appendix

Appendix A

Mean Academic Outcomes for Pupils with SEND and their Typical Peers (2015-2019)

		SEND			NonSEND		
Academic Outcome	Year	n	Mean	SD	n	Mean	SD
Reading	2015-16	65341	95.23	8.43	502701	103.60	7.73
	2016-17	66193	96.18	8.92	515239	105.18	7.69
	2017-18	69349	97.51	8.86	532354	106.04	7.19
	2018-19	97544	97.35	9.08	528380	105.73	7.38
Math	2015-16	67756	96.60	7.29	504489	103.91	6.45
	2016-17	67585	96.88	8.14	516157	105.16	6.82
	2017-18	70359	97.17	8.07	532644	105.33	6.66
	2018-19	98669	98.25	8.30	528805	106.32	6.29
Writing	2015-16	67851	96.07	7.01	504024	105.06	6.76
	2016-17	67789	97.77	7.49	515746	107.06	7.07
	2017-18	70576	97.37	8.06	533061	107.32	7.39
	2018-19	98788	98.21	8.36	528534	107.85	7.31

SEND = Special Educational Needs and Disabilities; NonSEND: Typically developing students.