

A Review and Evaluation of Secondary School Accountability in England: Statistical Strengths, Weaknesses, and Challenges for Progress 8 Raised by COVID-19

Introduction and background

Progress 8 is the current headline measure of school performance which was introduced in 2016. It aims to measure the average progress in attainment in each school over the course of secondary schooling up to year 11. In doing this, it takes into account pupil prior attainment at intake, and hence is widely viewed as a fairer measure than the previous one which looked at attainment only (i.e., the number of pupils with 5 GCSE passes, including maths and English). By introducing Progress 8, the government has, for the first time, made a school progress measure its headline measure.

This article was written by researchers from the University of Bristol School of Education and the Institute of Education. It evaluates the 'Progress 8' accountability system, assessing the statistical strengths and weaknesses of the measure for pupils from different groups and with different backgrounds. It also examines how well the measure stands up across time. Six simple recommendations are made to improve Progress 8 and school accountability.

Key findings

Calculations, presentation, and interpretation of Progress 8

- A pupil's Progress 8 score is calculated as the difference between their Attainment 8 score at the end of KS4 and the average Attainment 8 scores among all pupils nationally who had the same prior attainment at KS2. Attainment at KS2 is measured by pupils' average KS2 test scores, with pupils assigned into one of 34 prior attainment groups based on their average fine grade across the KS2 reading and maths tests. A school's Progress 8 score is the average of their pupils' scores.
- The DfE assign one of 5 Progress 8 bandings to each school calculated on the basis of its Progress 8 score and 95 per cent confidence interval. The bandings are: 'Well above average' (about 14% of schools in England in 2019), 'Above average' (17%), 'Average' (37%), 'Below average' (20%), and 'Well below average' (12%).

Choice of pupil outcome attainment measure

- A consistent critique of the previous 5A*–C measure was that it incentivised schools to focus excessively on children at the GCSE grade C/D borderline at the expense of more able pupils. Attainment 8, in contrast, is a continuous measure and so all grades contribute to the overall score. Therefore, a strength of Progress 8 is that it incentivises schools to focus on all children. However, it is not clear whether the Attainment 8 scale holds equal meaning at all points. Is, for example, the effort required to move pupils between a 4 and a 5 the same as between an 8 and a 9? To the extent to which there are differences, Progress 8 may still generate incentives to concentrate on pupils at specific points in the distribution. Burgess and Thomson (2020) find some limited evidence suggesting that the introduction of Progress 8 shifted the incentive to focus on borderline pupils to lower-attaining pupils. This shows

that even when improvements to measures are made, issues such as focus on groups of students can remain.

- Attainment 8 is heavily weighted (70:30) in favour of Ebacc subjects. Specifically, 5 of the 8 subjects must be Ebacc subjects and 2 of these, English and Maths, are double weighted. Entry patterns between 2010-11 and 2015-16 show that the emphasis on Ebacc subjects has led to rising entries for science and humanity GCSEs and an increasing proportion of students taking at least 3 Ebacc subjects, though languages have not shown similar increases.
- This increased commonality in the subjects entered by students across schools should make gaming Progress 8 harder than it was for 5A*–C. The incentive to enter pupils for vocational 'easy' non-GCSE options has been removed. A notable example of a qualification which was removed is the European Computer Driving Licence (ECDL). Investigations revealed that in some schools it was being taught in as little as 3 days as a 'fast-track' qualification.
- Analysis comparing the performance of schools before and after the change to the ECDL status showed that schools that had entered most of their students for the ECDL tended to see their Progress 8 scores decline.
- Despite the prescription of subjects in Progress 8 increasing commonality to a degree, the mix of subjects studied still varies across schools and so questions remain around the meaningfulness of some school comparisons.
- The emphasis on Ebacc subjects in the school accountability system has raised concerns over equality of access and effects on other subjects. Schools serving more disadvantaged students may find it harder to fulfil targets associated with the Ebacc and to recruit teachers of Ebacc subjects.



- To plan for school improvement, schools need a more comprehensive view of their performance than that which is provided by Progress 8.

Adjustments for pupil prior attainment and pupil background

- There is a conceptual challenge for Progress 8 in that it compares pupil performance in different subject mixes at the start and end of secondary schooling.
- As with any attainment measure, KS2 test scores will contain measurement error. Further research is required to establish just how important measurement error at KS2 is when calculating school Progress 8 scores.
- A consistent critique of Progress 8 is that it does not consider other pupil characteristics. Leckie and Goldstein (2019) showed that adjusting Progress 8 for student background can have a marked impact on the performance of schools: a third of schools in 2015-2016 would change Progress 8 bandings were the government to replace Progress 8 with a pupil background adjusted Progress 8 measure.
- Pupils who progress rapidly from KS1 to KS2 could be more likely to continue progressing rapidly during secondary schooling compared to pupils who coasted to the same KS2 performance. If so, schools might then be argued to be unfairly advantaged if they have disproportionate numbers of pupils who made rapid progress from KS1 to KS2.
- The current approach to Progress 8 ignores potential interactions between pupil characteristics, such as that identified for economically disadvantaged White British pupils, who perform disproportionately worse than their advantaged counterparts.
- Pupils with missing KS2 scores are excluded from Progress 8 data. Some schools have much higher proportions of such pupils than others.
- A school is not held accountable for the performance of pupils who attend the first 4 years of secondary schooling, but then change to another school. In contrast, where a pupil moves into a school for only the final year, the school is held accountable for the entirety of the progress that pupil has made over all 5 years of secondary schooling. Progress 8 therefore ignores pupil mobility, and may be incentivising off-rolling, i.e., removing students from a school through unofficial channels to improve scores on performance metrics.
- Progress 8 disadvantages schools with non-standard age ranges, such as University Technology Colleges (UTCs), which have less time with students in which to influence performance. Furthermore, UTCs take pupils that have often struggled at school up to this point.

Other issues with the Progress 8 measure

- School mean differences in 2018-2019 only accounted for 12 per cent of the total variation in pupil Progress 8 scores, with the remaining 88 per cent occurring within rather than between schools. There is risk that too much attention is placed on comparing school Progress 8 scores when much of the potential for increasing pupil progress lies within rather than between schools.
- The implications and meaning of a particular progress score are not easily understandable to users. The 95 per cent confidence intervals are also confusing. Even if the magnitude of Progress 8 scores can be made

readily understandable, they are still simple one-number summary measures which do not shed any light on which school policies and practices lead schools to score the way they do.

- The DfE also reports Progress 8 by pupil sub-groups, for instance by prior attainer (low, middle, high), disadvantage, English as an additional language, and gender. This reporting recognises that schools may be differentially effective for different pupil groups. However, the number of pupils in these groups within many schools is often low and so the resulting scores will be less reliable.
- Progress 8 reports the average pupil progress in each school. This ignores other potential aspects of a school's influence. Two schools that may appear equal in terms of average pupil progress may appear quite different when one explores the variability in progress within these averages. In one school, the variation in pupil progress around the school average may be very low, suggesting that the school is educating their pupils in a consistent way. In the second school, the variation may be very high, suggesting that the school is educating their pupils in a more erratic fashion.
- Progress 8 scores are unstable over time. Reliance on a single year of data amplifies the consequences of this instability and increases the pressure faced by schools and pupils. Small schools' effects are likely to be particularly unstable and may show large changes year on year.
- The cancellation of 2020 and 2021 KS2 tests due to COVID-19 will prevent Progress 8 from being published in its current format in 2025 and 2026; the necessary prior attainment measure will not be available. Although 2022 KS2 tests are scheduled to run, their accuracy will be questionable given differential lost learning across schools in 2020-2021, thus potentially impacting upon Progress 8 scores in 2027. The emphasis in these types of schools is also more focused on vocational education in preparation for future careers rather than the academic subjects prescribed by Attainment 8.

Recommendations to improve Progress 8

- Present a less EBacc-focused Progress 8 measure alongside Progress 8 to present a more holistic picture of school performance relevant to more schools and pupils.
- Present a pupil background adjusted Progress 8 measure alongside Progress 8 to provide a picture of school performance informed by school context.
- Recognise pupil mobility by making school Progress 8 scores an average of all pupils who attended each school, weighted by their time in each school.
- Communicate more clearly the relative importance of school Progress 8 scores in explaining the overall variation in pupil progress and the magnitude of each school's individual Progress 8 score.
- Increase warnings regarding the substantial uncertainty in using Progress 8 to predict the future performance of schools.
- Report multi-year averages for Progress 8 alongside current single-year summaries to illustrate and combat the instability of school performance over time.

The full document can be downloaded from:

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