



## We make it simple: how the government's new 16-19 league tables are calculated

The 16-19 accountability measures are changing. As the government releases its (very dense) guide setting out how the new measures will work, Schools Week's Philip Nye, a former National Audit Office auditor, takes on the gruelling task of guiding you through the key features

### WHAT'S CHANGING?

The new accountability measures will give a significant refresh to the performance tables published for school sixth forms and colleges.

Headline measures will be pulled out, displaying the key indicators of a school or college's performance more clearly.

Additionally, new indicators will be published, with information about retention and student destinations among the headline measures.

### WHY IS THIS CHANGING?

There are a number of stated aims of the new accountability measures, with informing student choice and helping schools and colleges better assess their own performance key among them.

The government has also said that the new data will help Ofsted in its judgments. Although not explicitly stated in the guidance, it should also make it easier to compare school sixth forms and colleges, by broadening the range of performance indicators reported.

### WHEN WILL THE CHANGE HAPPEN?

The new accountability system will come into force in 2016 (with the exception of Substantial Vocational Qualifications at level 2 which will be factored in 2017), with the first performance tables under the new system brought into the new measures in January 2017. Students starting two year courses from September 2014 will therefore fall under the new system.

The Department for Education has said that it plans to share pilot results under the new accountability system with schools and colleges in summer 2015, based on 2014 exam results, but not to make these publicly available.

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## HEADLINE MEASURES

|  |   |   |  |  |
|--|---|---|--|--|
| <b>STUDENT PROGRESS</b><br><br><b>+0.3</b><br><br>Students average more grades per academic qualification compared to the national average | <b>ATTAINMENT</b><br><br><b>C</b><br><br>Students average this grade in their academic qualifications | <b>ENGLISH AND MATHS GCSE</b><br><br><b>+0.2</b><br><br>Students average this many more grades in maths compared to others with the same results at 16 who had also not achieved A*-C at 16 | <b>RETENTION</b><br><br><b>93%</b><br><br>% of all students retained to the end of their studies | <b>DESTINATIONS</b><br><br><b>80%</b><br><br>% of all students going on to sustained education, employment, or training at the end of their course |
|--|---|---|--|--|

### HOW WILL IT WORK?

Perhaps the biggest change under the new system is the introduction of headline measures that will be published for every school and college. These are intended to provide a snapshot of performance, that make it easy to absorb the key indicators of a sixth form or college's performance. Five headline measures are being brought in: progress, attainment, progress in English and maths, retention and destinations.

And a separate score will be published for these measures for each type of qualification offered by a school or college: academic programmes, Applied General programmes and Tech Level programmes at level 3, and Substantial Vocational Qualification programmes at level 2.

Alongside these headline measures, national averages will be published. And the DfE has said that additional measures and underlying data on performance will also be available to students, parents and other interested parties. Additional measures will provide details of specifics such as attainment in qualifications below level 3 and A-level attainment, while underlying data will be allow people to explore things such as attainment in specific subjects.

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### SECTOR REACTION

Joy Mercer, the Association of College's senior policy manager for quality and assurance, said: "The new performance tables, which will be introduced in January 2017, move away from success in exams, towards a range of measures with a focus on the progress students make while they are at the college.

"This is a positive move, but we have concerns about how easily this will be understood by parents and potential students."

Stephan Jungnitz, the Association of School and College Leaders' colleges specialist said, "The accountability measures themselves aren't the problem, it's the policies that lie behind them that are the issue, especially the perpetuated notion that colleges can somehow transform the attainment of post-16 students in GCSE maths and English.

"By and large, schools will have done their utmost to wring every last drop of attainment in these GCSE subjects from young people already. It's mostly colleges that work with students who haven't already achieved a grade C in maths or English, and the performance table may thus reflect unfairly on providers of post-16 education."

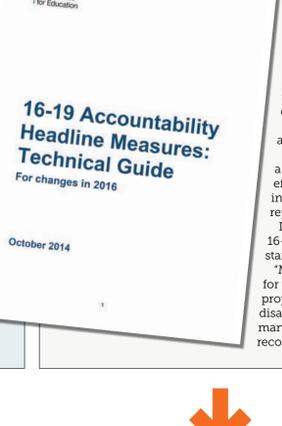
Sion Humphreys, policy adviser at the NAHT union, said: "We broadly welcome the new accountability measures but with some reservations. We do not feel that the attainment of students working at entry level or level 1 is adequately reflected in the new measures. The association would like to see a more inclusive approach that recognises the notion of 'stage not age'."

"Our major concern rests with the intention to employ destination data as an accountability measure.

"Worries include both the methodological challenges of making this a sufficiently robust basis upon which to make judgements about the effectiveness of a school or college and the degree of subjectivity involved, in determining the extent to which an individual pathway is deemed to represent progress."

Ian Toone, principal officer (education) at the Voice union said: "The 16-19 sector is too diverse and complex to be strait-jacketed into five standardised and homogeneous performance measures."

"Many schools, colleges and independent training providers depend for their recruitment on unique selling points that differ from the proposed measures. Such institutions are often reaching out to the most disadvantaged and marginalised young people in our communities, and many of them achieve the seemingly impossible, but will receive scant recognition under the new system."



## THE PROGRESS MEASURE

**STUDENT PROGRESS**  
**+0.3**

Under the new system the progress measure will carry particular significance, as the basis by which minimum standards are measured. This represents a significant shift from the current system, where attainment is used as the basis for judging whether minimum standards have been reached – currently school sixth forms are considered to be underperforming if fewer than 40 per cent of students achieve an average score per entry in academic qualifications of 172 points.

No details are available yet on the minimum standard will be drawn, though the DfE says that it expects to publish details on this next summer.

For academic subjects (for the purposes of this explainer, the focus will be on this type of qualification), the progress measure will set out how much progress students make in their studies – compared to equivalent intakes.

This is calculated in the following way. For any given subject, the DfE will work out the relationship between students' GCSE performance – no other key stage 4 qualifications are taken into account in the calculation of the progress measure for academic qualifications – and their performance in the level 3 qualification (see the graph below).

Then for every student at a particular

institution it will be possible to see how, based on the average grades they came in with at level 3, they performed versus others taking the same qualification. This leads to a value-added score being calculated for each student, for each subject.

Once these have been calculated the results are aggregated, beginning at subject level (see table). The value-added scores for pupils who took the qualification are averaged, to give the value-added score for the qualification as a whole.

The progress rating for the school or college at large is then worked out by averaging each of these subject-specific scores, weighting each qualification by the number of students who took it.

It is this overall value-added score for academic qualifications that will feature in the published headline performance measures.

A score of +0.5 would be equivalent to performance half a grade above average for the intake of the sixth form. Confidence intervals will also be published alongside the headline score.

Other things to bear in mind are that results of key stage 4 qualifications once they have started at sixth form or college will not affect a student's prior attainment rating. Additionally, non-completion of a course will not be treated as a fail.

### CALCULATION OF AN INSTITUTION'S PROGRESS SCORES

In this fictitious example, Sanctuary Sixth Form has nine students and offers two subjects, economics A-level and French A-level.

| Subject           | Entry   | Value-added score | Subject level score                            | Provider's overall score                                 |
|-------------------|---------|-------------------|--|--|
| Economics A-Level | Nicky   | +2                | = +2-1+1+0-1<br>5<br>= +1 / 5<br>above average | Weighted<br>average =<br>(+0.2 x 5)<br>+ (+0.5 x 4)<br>9 |
|                   | Michael | -1                |  |  |
|                   | Ed      | +1                |  |  |
|                   | Alan    | 0                 |  |  |
|                   | Ruth    | -1                |  |  |
| French A-Level    | Charles | +1                | = +1+1+0+0<br>4<br>= +2 / 4<br>above average   | = +0.3 grades<br>above average                           |
|                   | Estelle | +1                |  |  |
|                   | David   | 0                 |  |  |
|                   | Gillian | 0                 |  |  |

Overall, the school would be reported with a progress grade of +0.3 grades above average

### ENGLISH AND MATHS GCSE

**ENGLISH AND MATHS GCSE**  
**+0.2**

A second progress indicator will feature in the headline measures, focusing specifically on English and maths GCSEs for students who had not achieved a grade A\*-C in one or other of these subjects by the age of 16. Separate average progress grades will be reported for each of these subjects for every institution.

This comes as new rules are brought in which require students with only a grade D or lower in English or maths to continue studying these subjects until the age of 18.

The English and maths measure will be calculated in a similar manner to the main progress measure, albeit only prior attainment in English and maths will be taken into account when considering what progress has been made by students.

So if a student enters with a grade D, and achieves a B versus an average of a grade C achieved by their peers, this will count as value-added score of +1 for the pupil. The institution's English and maths progress grade will then be calculated as the average of individual students' performance scores.

Importantly, though, where a student achieves a lower English and maths grade than they entered with, a cap will be applied to their performance – meaning they will only be treated as if they achieved one grade lower than their previous grade, even if they actually achieved a lower grade.

So a student who entered with a grade D and achieved a grade F would be treated as if they gained a grade E for the purpose of working out their value-added measure.

This would be the case, too, if they did not take the exam. This would ensure that school sixth forms and colleges who take on students "with poor motivation" are treated fairly, the official DfE guidance says.

## ATTAINMENT

**ATTAINMENT**  
**C**

Unsurprisingly, a simple attainment measure will feature among the five headline indicators – though there will be changes from how this features in the current performance tables.

The DfE says that this will be something "which parents can easily understand and use to compare providers".

For academic subjects (for the purposes of this explainer, the focus will be on this type of qualification), the headline measure will give an overall "A-level style" grade, ranging from A\* to U, albeit with plus and minus grades available (e.g. B-).

As with other elements of the new accountability measures, however, more detailed underlying information will be available to those who want it, including attainment in academic qualifications below level 3, and in A-levels alone.

The calculation of the headline attainment measure will come from averaging out the grade achieved in all qualifications completed.

Withdrawals will not be counted as

fails in the calculation.

Compared to attainment measures published currently, however, there will be a change, with different weighting being given to grades achieved (see table right).

This has the effect of removing the "cliff edge" at the pass/fail boundary.

The removal of the cliff edge, the DfE says, means the failure of a single student no longer has a disproportionate effect on a sixth form or college's score.

Despite these changes, the DfE says that it expects the impact on sixth forms and colleges to be smaller than the annual fluctuations generally seen in performance tables.

"We do not expect that the new point score will create wholesale changes in how schools and colleges perform on attainment measures in performance tables," guidance on the changes says.

"The impact is expected to be smaller than the year-on-year variation in institution performance that is typically demonstrated in performance tables."

### CALCULATION OF AN INSTITUTION'S ATTAINMENT SCORE

In this fictitious example, Sanctuary Sixth Form has nine students, who each take one A-level. The sixth form's attainment under the existing, and the new system, are as follows

Point scores under the existing and new systems

|                 | Fail | E   | D   | C   | B   | A   | A*  |
|-----------------|------|-----|-----|-----|-----|-----|-----|
| Existing system | 0    | 150 | 180 | 210 | 240 | 270 | 300 |
| New system      | 0    | 10  | 20  | 30  | 40  | 50  | 60  |

Calculation of an institution's attainment score

| Existing system |           |                        | New system     |           |                     |
|-----------------|-----------|------------------------|----------------|-----------|---------------------|
| Student         | Grade     | Point score            | Student        | Grade     | Point score         |
| Nicky           | A         | 270                    | Nicky          | A         | 50                  |
| Michael         | C         | 210                    | Michael        | C         | 30                  |
| Ed              | A*        | 300                    | Ed             | A*        | 60                  |
| Alan            | B         | 240                    | Alan           | B         | 40                  |
| Charles         | U         | 0                      | Charles        | U         | 0                   |
| Ruth            | B         | 240                    | Ruth           | B         | 40                  |
| Estelle         | D         | 180                    | Estelle        | D         | 20                  |
| David           | Withdrawn |                        | David          | Withdrawn |                     |
| Gillian         | U         | 0                      | Gillian        | U         | 0                   |
| <b>Total</b>    |           | <b>1,440</b>           | <b>Total</b>   |           | <b>240</b>          |
| <b>Average</b>  |           | <b>= 1,440/8 = 180</b> | <b>Average</b> |           | <b>= 240/8 = 30</b> |
|                 |           | <b>GRADE D</b>         |                |           | <b>GRADE C</b>      |

Withdrawn students do not count for attainment measures under either the existing or the new systems

## RETENTION

**RETENTION**  
**93%**

This represents an entirely new metric that will be published, and reflects the importance being put on retention as the school participation age rises to 18. It is, however, in line with the way that funding is provided.

Calculation of this measure is done on a whole student basis, rather than at the level of individual qualifications.

That means students need to stick to their core aim to be recorded as retained in this indicator – so for a two year A-level programme, a student needs to complete both years of only one A-level, for example. (Core aims are the 'substantive' qualification being undertaken in a student's programme. In the case of academic qualifications one A-level would be designated as such by their sixth form or college.)

Similarly, if a student were taking an AS-level only programme, they would only need to complete the one-year course for one of the subjects studied to count as retained. Where a student studies AS-levels followed by A-levels, the DfE has said they would only be counted for the purposes of the retention measure at the end of their A-level course.

The measure also feature what is effectively a six week "cooling off" period – any withdrawals from a course during this time will not affect the measure.

As with other headline measures, supporting information will also be available – among them, the number of level 3 students who are retained but not assessed, meaning it should be clear if sixth forms are attempting to game the system by getting them to complete a course of study but then not entering students for their final exam.

Calculation of an institution's retention score

210

students begin courses

186 students complete their course

14 fail to complete their course

10 drop out within the first 6 weeks

186 out of 200 are counted as retained

93% retention

## DESTINATIONS

**DESTINATIONS**  
**80%**

Of the five new headline measures, destinations is the one with the biggest question mark still hanging over it. It is intended to show how many students go on to "sustained education, employment or training" at the end of their course, though a number of hurdles remain to be cleared – indeed, the new guidance on the 16-19 accountability measures states that this measure will not be included in the performance table until the data is "robust" enough.

The difficulty arises because – inevitably – the measure relies on information about students some months after they have left college or sixth form. Specifically, the period that matters is the six month period from October to March following completion

of a course.

To qualify as being in sustained education, employment or training, a young person must spend at least five of these six months in employment or training, or complete the first two terms of that academic year in education.

The government has published data on this measure as an "experimental statistic" for the 2011/12 academic year, but that is "high percentages of activity are not captured" in the measure. The DfE says that, when published, data for this measure will come from matching National Pupil Database records to records held by HM Revenue and Customs and Department for Work and Pensions – but that is not as likely to be as easy as it sounds.

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