

Response to Ofqual consultation¹ on setting the grade standards of new GCSEs in England

Your details

Would you like us to treat your response as confidential?*

No

Is this a personal response or an official response on behalf of your organisation?*

Official response

Type of responding organisation*

Other representative or interest group

Type of representative group or interest group

Subject association or learned society

Nation*

England

Questions

Proposal: We are proposing that the first award of new GCSEs will be based primarily on statistical predictions, in order to protect the interests of students. Examiner judgement will play a secondary role as it will be, on the whole, less reliable.

Where the size and nature of the candidature means that statistical predictions are less reliable, a modified approach based on a wider range of information (including, for example, a greater reliance on examiner judgements) may be needed for the first award.

Question 1:

To what extent do you agree or disagree with our proposed approach to the first award of new GCSEs?

Agree

¹ Ofqual (2016) 'Setting the grade standards of new GCSEs in England: 2017 & 2018' [webpage], 22 April 2016. Available at: <https://www.gov.uk/government/consultations/setting-the-grade-standards-of-new-gcses-in-england-2017-2018>

Question 4

To what extent do you agree or disagree that we should adopt the ‘tailored approach’ to awarding grade 9 in new GCSEs to be awarded from summer 2018?

Strongly disagree

Please give reasons for your answer:

Modelling of the tailored approach shows that in some subjects it will be easier, on a statistical basis, to attain Grade 9, in comparison to others that are taken by the whole cohort. This requires further review by Ofqual and as matters stand we prefer the 20% approach.

Question 5

To what extent do you agree or disagree that we should also adopt the ‘tailored approach’ for those subjects to be awarded from summer 2017 – i.e. English language, English literature and mathematics?

Strongly disagree

Please give reasons for your answer:

The UK has deficits in mathematical and quantitative skills, including by comparison to other countries, and we believe that comparatively low levels of participation in mathematical subjects after the age of 16 have helped to produce this.² This relatively low level of participation needs to be addressed and we find evidence developed by MEI convincing, that the tailored approach will have some pernicious effects. Compared to the “20%” method it reduces the accessibility of high attainment in mathematics as compared to certain other subjects – for example, comparison has been made to single science GCSEs that are pursued by higher-attaining students.

In both the ‘tailored’ and current grading formulas there is some difference in the chance of attaining particular grades that is produced simply because GCSE Mathematics and GCSE English are taken by the whole cohort, whereas other GCSE subjects are selective to varying extents. If the tailored approach is adopted, Ofqual modelling suggests 4% of the cohort will attain the highest grade (grade 9) in GCSE Mathematics, whereas in single science subjects the proportion is expected to be about 14%. Given the limited scope of curriculum choice for students entering A Level (being limited often to three subjects) the greater difficulty of attaining highest grade in Mathematics is likely to lead to continued perception of it as a ‘hard’ subject, in our view unnecessarily, and this will prejudice students against further participation post-16.

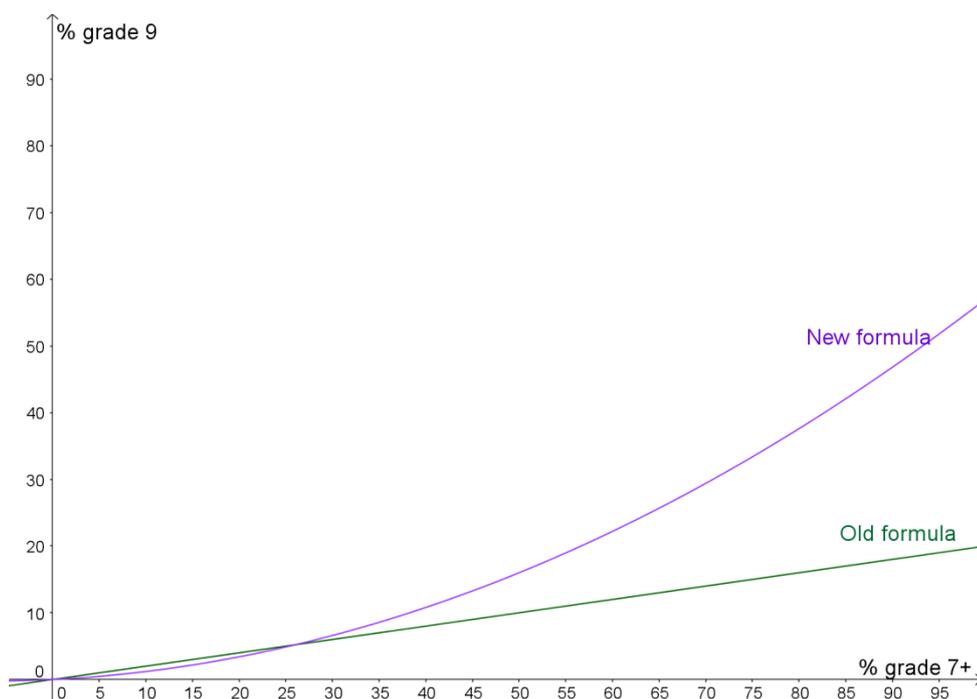
Under the circumstances, we prefer the ‘20%’ method (outlined below) for attaining greater comparability in the award of the top grade across subjects. We provide our further working and discussion of this below.

² Mason, G. Nason, M. & Rosso, A. (2015) *State of the nation: A review of the evidence on the supply and demand of quantitative skills* (PDF). NIESR & British Academy, available from: <http://www.niesr.ac.uk/sites/default/files/publications/BA-NIESR%20State%20of%20the%20Nation%20-%20A%20review%20of%20evidence%20on%20the%20supply%20and%20demand%20of%20QS.pdf>

In April 2016, Ofqual proposed a change to the method of deciding how many grade 9s should be awarded for reformed GCSEs.

- Original method: 20% of those awarded grade 7 and above would be awarded grade 9 in each subject.
- Proposed method: Percentage of those achieving at least grade 7 who should be awarded grade 9 = $7\% + 0.5 \times (\text{percentage of candidates awarded grade 7 or above})$.

The effect of each formula is shown below,



The proposed new formula would result in a greater proportion of students attaining grade 9 in subjects that have a greater proportion of grade 7+. High-attaining students will therefore have a greater statistical chance of attaining the highest grade in subjects where they are alongside other “clever students”, compared against subjects which are taken by the whole cohort. For science, it tends to be students who are most able who are entered for separate science GCSEs, whereas English Language and Mathematics are pursued by the whole GCSE cohort. Ofqual’s modelling suggests the following effects on grade 9 awards,

Subject	% grade A*	% A and A*	% grade 9 (old method)	% grade 9 (proposed method)
English Language	6.5	22.8	4.5	4.2
Mathematics	8.8	21.5	4.2	3.7
Biology	19	46.2	9.2	13.9
Chemistry	19.6	46.8	9.3	14.2
Physics	20.5	47.1	9.4	14.4

The modeling suggests to us that Ofqual's proposed grading system would lead to students who are entered for three separate sciences and higher tier mathematics at GCSE being more likely to achieve grade 9 in their science subjects than in mathematics. This has some inherent unfairness and we are concerned about the pernicious effect this may have on further participation in mathematics. It may also be unfair for "clever" students whose option to take single sciences (or other selective subjects) is constrained. In combined Science for example, Ofqual anticipate that only 1.2% of the cohort will achieve Grade 9.

Given these concerns, at this time we think the 20% method likely to be preferable. Further, we believe that if the tailored approach is adopted it must be made clear that the distribution of grades at the higher end are not indicative of whether subjects are more or less 'difficult', given the effect observed from the variation between some subject cohorts.

[Response ends]

This response was advised by the Royal Statistical Society's Education Policy Advisory Group.

Submitted by the RSS' Policy and Research Manager, 17 June 2016