

# GCSE Statistics: Consultation on Conditions and guidance

## How to respond to this consultation

The closing date for responses is **6 March 2016**.

Please respond to this consultation in one of three ways:

- Complete the online response at <https://www.surveygizmo.com/s3/2577838/gcse-reform-regulations-for-statistics>
- Complete these consultation questions and email your response to [consultations@ofqual.gov.uk](mailto:consultations@ofqual.gov.uk). Please include the consultation title (GCSE Statistics Consultation 2016) in the subject line of the email and make clear who you are and in what capacity you are responding
- Post your response to: GCSE Statistics Consultation 2016, Ofqual, Spring Place, Coventry Business Park, Herald Avenue, Coventry, CV5 6UB, making clear who you are and in what capacity you are responding

## Evaluating the responses

To evaluate responses properly, we need to know who is responding to the consultation and in what capacity. We will therefore only consider your response if you complete the information page.

Any personal data (such as your name, address and any other identifying information) will be processed in accordance with the Data Protection Act 1998 and our standard terms and conditions.

We will publish our evaluation of responses. Please note that we may publish all or part of your response unless you tell us (in your answer to the confidentiality question) that you want us to treat your response as confidential. If you tell us you wish your response to be treated as confidential, we will not include your details in any published list of respondents, although we may quote from your response anonymously.

Please respond by **6 March 2016**.

## Responding to the consultation

### Your details

To evaluate responses properly, we need to know who is responding to the consultation and in what capacity. We will therefore only consider your response if you complete the following information section.

We will publish our evaluation of responses. Please note that we may publish all or part of your response unless you tell us (in your answer to the confidentiality question) that you want us to treat your response as confidential. If you tell us you wish your response to be treated as confidential, we will not include your details in any published list of respondents, although we may quote from your response anonymously.

Please answer all questions marked with a star\*

Name\* **Charlie Stripp**

Position\* **Chief Executive**

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

If you answer yes, we will not include your details in any list of people or organisations that responded to the consultation.

Yes  No

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

Personal response (please answer the question ‘If you ticked “Personal response”...’)

Official response (please answer the question ‘If you ticked “Official response”...’)

**If you ticked “Personal response”, which of the following are you?**

Student

Parent or carer

Teacher (but responding in a personal capacity)

Other, including general public (please state below)

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**If you ticked “Official response”, please respond accordingly:**

**Type of responding organisation\***

Awarding organisation

Local authority

School or college (please answer the question below)

Academy chain

Private training provider

University or other higher education institution

Employer

Other representative or interest group (please answer the question below)

**School or college type**

- Comprehensive or non-selective academy
  - State selective or selective academy
  - Independent
  - Special school
  - Further education college
  - Sixth form college
  - Other (please state below)
- 

**Type of representative group or interest group**

- Group of awarding organisations
- Union
- Employer or business representative group
- Subject association or learned society
- Equality organisation or group
- School, college or teacher representative group
- Other (please state below)

MEI is a charity and a membership organisation. It is an independent curriculum development body for mathematics. It is a major provider of mathematics teaching and learning resources, and of mathematics CPD for secondary school and post-16 mathematics teachers.

MEI developed and manages the DfE-funded Further Mathematics Support Programme.

MEI developed the current OCR(MEI) AS in Statistics as well as the OCR(MEI) suite of AS/A level Mathematics and Further Mathematics qualifications; these are administered by OCR.

**Nation\***

England

Wales

Northern Ireland

Scotland

Other EU country: \_\_\_\_\_

Non-EU country: \_\_\_\_\_

**How did you find out about this consultation?**

Our newsletter or another one of our communications

Our website

Internet search

Other

\_\_\_\_\_

**May we contact you for further information?**

Yes  No

## Questions

**Question 1: To what extent do you agree or disagree that we should introduce a Condition which requires exam boards to comply with the relevant subject content and assessment objectives?**

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Please explain your reasons:

Clearly this is an essential part of Ofqual's regulation of the qualifications.

We must observe that the removal of content since the previous consultation in order that the subject can be assessed only by examination is scandalous. Who defines what the subject of statistics is? Who knows best what the nation needs in terms of statistical education? We agree with the Royal Statistical Society in their publicly available response<sup>1</sup> to the previous consultation that statistics is a practical subject, and aspects of it require non-exam assessment.

<sup>1</sup> <http://www.rss.org.uk/Images/PDF/influencing-change/2015/RSS-response-to-Ofqual-new-gcses-a-levels-Statistics-Nov-2015.pdf>

**Question 2: To what extent do you agree or disagree with our proposed approach to tolerances for assessment objective weightings in GCSE statistics?**

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Please explain your reasons:

We agree that some tolerance in the weighting is required so that good quality tasks or questions are not replaced with lower quality questions merely to meet targets exactly.

The proposal that the average tolerance over years 1-4, 5-8 etc must be zero means that there is no flexibility in years 4, 8, 12 etc.

e.g if the weighting achieved for AO1 in years 5, 6, 7 is 52%, 49%, 51% then in year 8 the weighting has to be 48% to achieve the required average weighting. There can never be any flexibility in year 8.

If an awarding organisation can achieve a fixed target in one year then it can achieve it in every year. It also seems unfair to some cohorts of candidates that the rules for years 4, 8, 12 etc are different from the rules for other years.

It would seem more sensible, and fairer, that the tolerance is  $\pm 2\%$  in any year, with the awarding organisation explaining its approach to the tolerance in its assessment strategy. This would be in line with the proposed arrangements for AS/A level Mathematics and Further Mathematics.

**Question 3: To what extent do you agree or disagree that we should introduce guidance which clarifies how exam boards should interpret our assessment objectives?**

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Please explain your reasons:

Clear strong guidance is vital to ensure a common understanding of what the assessment objectives mean and how they should be implemented.

**Question 4: To what extent do you agree or disagree with our proposed approach to the design of tiered assessments in GCSE statistics?**

- Strongly agree
- Agree
- Neither agree nor disagree

Disagree

Strongly disagree

Please explain your reasons:

Having a similar approach to that for GCSE Mathematics is sensible.

**Question 5: To what extent do you agree or disagree that mixed-tier entry should be prohibited in GCSE statistics?**

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

Please explain your reasons:

It may be that an awarding organisation can develop an assessment structure which makes mixed-tier entry desirable and sensible. We would not want to rule this out without seeing what is proposed.

**Question 6: To what extent do you agree or disagree with our proposed approach to assessing the full grade range in GCSE statistics?**

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

Please explain your reasons:

We do not agree, however, that assessments should 'allow [exam boards] to rank students according to their abilities'. (Para 2.23). This is an unnecessary and unachievable burden on the exam system, particularly with tiered examinations. It is sufficient that 'accurate and consistent setting of grades' is achieved.

**Question 7: To what extent do you agree or disagree with our proposed approach to securing comparability across tiers in GCSE statistics?**

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Please explain your reasons:

We consider that this is as sensible an approach as is possible, but we are not sure whether there is evidence that it is successful, for example in GCSE Mathematics. There is evidence that the facility of questions depends on their context within the question paper; the same question appearing as the hardest question on an easier paper may not have the same facility among the same group of students if it is set as the easiest question on a harder paper. The statistical use of the outcomes from common questions in setting grade boundaries needs to be treated with caution.

**Question 8: Do you have any comments on our proposed Conditions and requirements for GCSE statistics?**

- Yes  No

**Assessment Objectives**

We consider that the weighting given to AO3 is probably too high. We have not written any trial papers under these assessment objectives to be sure of this. We suspect that this weighting may result in too many questions being designed about artificial situations of the sort 'Jim suggests collecting a sample as follows. Comment'. Such questions have their place, but not too many of them.

**Preclusion of mixed tier entry Paragraph 3.**

This needs to be restricted to 'in any one examination series'. It would be perfectly acceptable for a Learner to enter for Foundation tier in one series and for Higher tier in a subsequent series.

**Question 9: Do you have any comments on our proposed guidance for GCSE statistics?**

- Yes  No

We note a couple of mistakes.

- In the guidance for AO1, in the ‘Interpretations and definitions’ column, under the bullet point ‘standard statistical techniques’ the reference to the DfE document has not been given, whereas it has been in the Conditions.
- In the guidance for AO3, in the ‘Interpretations and definitions’ column, under the bullet point ‘Statistical methodologies’ it should read ‘... part of the statistical...’

More importantly, the Assessment Objectives have been designed in such a way as to split up the statistical enquiry cycle. There appears to be no requirement to assess the cycle as a whole; questions may be set which address each part of it in isolation. This risks taking us down the same route as GCSE Mathematics vis-à-vis problem solving. In AS/A level Mathematics this has been tackled by statements in the Guidance which require exam boards to set questions which reflect the entire problem solving cycle. We strongly recommend something similar for GCSE Statistics.

**Question 10: We have not identified any ways in which the proposals for GCSE statistics would impact (positively or negatively) on persons who share a protected characteristic.<sup>1</sup> Are there any potential impacts we have not identified?**

Yes  No

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**Question 11: Are there any additional steps we could take to mitigate any negative impact resulting from these proposals on persons who share a protected characteristic?**

Yes  No

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<sup>1</sup> ‘Protected characteristic’ is defined in the Equality Act 2010. Here, it means disability, racial group, age, religion or belief, pregnancy or maternity, sex, sexual orientation and gender reassignment.

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**Question 12: Do you have any other comments on the impacts of the proposals on students who share a protected characteristic?**

Yes  No

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## Accessibility of our consultations

We are looking at how we provide accessible versions of our consultations and would appreciate it if you could spare a few moments to answer the following questions. Your answers to these questions will not be considered as part of the consultation and will not be released to any third parties.

**We want to write clearly, directly and put the reader first. Overall, do you think we have got this right in this consultation?**

Yes  No

**Do you have any comments or suggestions about the style of writing?**

Yes  No

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**Do you have any special requirements to enable you to read our consultations? (for example, screen reader, large text, and so on)**

Yes  No

**Which of the following do you currently use to access our consultation documents? (select all that apply)**

Screen reader / text-to-speech software

Braille reader

Screen magnifier

Speech-to-text software

Motor assistance (blow-suck tube, mouth stick, and so on)

Other .....

**Which of the following document formats would meet your needs for accessing our consultations? (select all that apply)**

- A standard PDF
- Accessible web pages
- Large-type PDF (16 point text)
- Large-type Word document (16 point text)
- eBook (Kindle, iBooks, or similar format)
- Braille document
- Spoken document
- Other .....

**How many of our consultations have you read in the last 12 months?**

- 1
- 2
- 3
- 4
- 5
- More than 5