



Department
for Education

Reforming Key Stage 4 Qualifications

Consultation Response Form

The closing date is: 10 December 2012
Your comments must reach us by that date.

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes, primarily the Freedom of Information Act 2000 and the Data Protection Act 1998.

If you want all, or any part, of your response to be treated as confidential, please explain why you consider it to be confidential.

If a request for disclosure of the information you have provided is received, your explanation about why you consider it to be confidential will be taken into account, but no assurance can be given that confidentiality can be maintained. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

The Department will process your personal data (name and address and any other identifying material) in accordance with the Data Protection Act 1998, and in the majority of circumstances, this will mean that your personal data will not be disclosed to third parties.

Please tick if you want us to keep your response confidential.

Reason for confidentiality:

Name	David Miles
Organisation (if applicable)	The Mathematical Association
Address:	259 London Road, Leicester, LE2 3BE.

If your enquiry is related to the policy content of the consultation you can contact The Department on:

Telephone: 0370 000 2288

e-mail: KS4QualReform.CONSULTATION@education.gsi.gov.uk

If your enquiry is related to the DfE e-consultation website or the consultation process in general, you can contact the Consultation Unit by e-mail: consultation.unit@education.gsi.gov.uk or by telephone: 0370 000 2288 or via the Department's ['Contact Us'](#) page.

Please mark the box that best describes you as a respondent.

<input type="checkbox"/> School	<input type="checkbox"/> College	<input type="checkbox"/> Academy
<input type="checkbox"/> Higher Education Institute	<input type="checkbox"/> Further Education Institute	<input type="checkbox"/> Local Authority
<input checked="" type="checkbox"/> Subject Association	<input type="checkbox"/> Parent	<input type="checkbox"/> Student
<input type="checkbox"/> Union	<input type="checkbox"/> Employer-Business Sector	<input type="checkbox"/> Governor
<input type="checkbox"/> HT/Teacher	<input type="checkbox"/> Awarding Organisations	<input type="checkbox"/> Other

Please Specify:

The Mathematical Association

The Mathematical Association is the oldest of the subject associations and the largest such association in Britain supporting mathematics teachers in their endeavour to promote good mathematics teaching and learning.

Title

1 Do you agree that the new qualifications should not be called "GCSEs"?

Agree

Disagree

Not sure

Comments:

A distinction should be made between GCSEs and the new qualifications so that stakeholders acknowledge and recognise the significant differences between them. This is particularly important if the 'pass' mark is to be raised or early cohorts could be placed at a competitive disadvantage in the employment marketplace compared to their predecessors.

2 a) Do you agree that the new qualifications should be called English Baccalaureate Certificates?

Agree

Disagree

Not sure

Comments:

It does not make sense to use the word 'Baccalaureate' to describe individual subject qualifications and the 'English Baccalaureate' is an attainment table measure not a qualification. The clear implication is that new certificates will not be introduced for any subjects that do not contribute to this arbitrary measure. Although the focus of The Mathematical Association is firmly on mathematics, we are concerned that this may result in the unwelcome marginalisation of technological and creative subjects.

2 b) If not, what alternative title should be adopted?

Comments:

No response.

High expectation of performance and accurate grading

3 Do you agree with our expectations for grading structures, set out in paragraphs 5.4 to 5.5?

Agree

Disagree

Not sure

Comments:

The Mathematical Association believes it is right and proper to have high expectations of every child but we are realistic enough to accept that there will always be a significant proportion of candidates who will not perform above and beyond GCSE Grade C standard no matter how hard they try or how well they are taught. The consultation document fails to explain how these new qualifications will cater for the needs of this sizeable minority.

We would support a change to the grading structure (presumably from letters to numbers?) to reduce the likelihood of assumptions being drawn about the comparability of grades under the two systems.

4 Do you believe that we should insist on a common grading structure for all English Baccalaureate Certificates or should we allow Awarding Organisations the freedom to innovate?

Common Grading Structure

Freedom to innovate

Other

Comments:

The grading structure should be transparent and easy to understand and this necessitates a common approach across all subjects. A supplementary grade could be awarded for certain elements such as practical work or oral skills if finer detail is required in certain subjects.

No tiering

5 Do you agree that it will be possible to end tiering for the full range of subjects that we will be creating new qualifications for?

Yes

No

Not Sure

Comments:

We do not believe it is sensible or desirable to introduce a single tier examination in mathematics. Presenting able candidates with questions they could answer in Primary School will only serve to insult their intelligence and weaker students will be demoralised and demotivated by the prospect of an assessment that is largely inaccessible to them.

The inevitable consequence of an end to tiering is an examination pitched at the middle. Such an examination will offer insufficient stretch and challenge for capable mathematicians and fail to provide an adequate platform for further study. A precedent is the abolition of the Intermediate Tier at GCSE. Regrettably, this has resulted in the most able spending an increased amount of time studying elementary material as the demanding content now occupies a reduced proportion of the paper. This problem would only be exacerbated by the abolition of tiering.

6 Are there particular approaches to examinations which might be needed to make this possible for some subjects?

Yes

No

Not Sure

Comments:

We are sceptical about the possibility of developing single tier mathematics papers that are differentiated by outcome but, were it possible to do so, successfully assessing the gamut of mathematical knowledge and range of valued techniques would certainly present a mountainous challenge. Such a fundamental change in approach would necessitate a major research and development programme over a period that is incompatible with the proposed timescale for these new qualifications.

Assessed 100% by examination, or minimising reliance on internal assessment

7 a) We intend that English Baccalaureate Certificates should be assessed 100% by externally marked examinations. Do you agree?

All

English

mathematics

sciences

history

geography

languages

None

Comments:

We believe it is appropriate for mathematics to be examined in this way so long as there is a clear expectation that students will be given opportunities in lessons to experience open-ended investigations and extended problem solving.

We do not have a view about whether 100% external assessment is a desirable model for other subjects.

7 b) If not, which aspects of English, mathematics, the sciences, history, geography or language do you believe absolutely require internal assessment to fully demonstrate the skills required, and why?

Comments:

No response.

Size requirement for syllabus

8 Should our expectation be that English Baccalaureate Certificates take the same amount of curriculum time as the current GCSEs? Or should schools be expected to place greater curriculum emphasis on teaching the core subjects?

Same amount of curriculum time Greater curriculum emphasis Other

Comments:

The Mathematical Association believes the importance of our subject is such that it should be afforded the maximum possible curriculum time. However, these decisions are best made in schools by Headteachers and any direction should be no stronger than a recommendation. The problem of a continued national shortage of qualified mathematics teachers needs to be carefully considered before any such recommendation is made. A significant number of secondary mathematics lessons are already taught by non-specialists and there is little to gain by spreading the existing expertise more thinly.

Examination aids

9 Which examinations aids do you consider necessary to allow students to fully demonstrate the knowledge and skills required?

Comments:

At present the only examination aids permitted in mathematics are a calculator and a formula sheet.

The Mathematical Association strongly supports the continued availability of a calculator in at least part of the examination as this is essential for the meaningful assessment of topics such as trigonometry. We understand that the retention of a formula sheet may be considered a barrier to increased rigour but would argue that access to mathematical formula books are a feature of A Level and university examinations.

Subject suites

10 Do you agree that these are appropriate subject suites? If not, what would you change?

Yes

No

Not Sure

Comments:

It is proposed that the majority of candidates will attain three qualifications in Science, two in English but only one in mathematics. An elite few will be entered for an optional second award in Additional Mathematics. This lack of parity will do nothing to raise the profile and status of mathematics in the eyes of candidates and the general public.

The Mathematical Association believes every student should be given the opportunity to attain two mathematics qualifications. It would certainly be easier to deliver a numeracy guarantee across a pair of qualifications. Any development work should be informed by the analysis conducted on the GCSE Linked Pair Pilot in Methods in Mathematics and Applications of Mathematics. We believe it is absolutely essential that both qualifications are examined in parallel to reduce the prospect of early and repeated entry.

11 Is there also a need for a combined science option covering elements of all three sciences?

Yes

No

Not Sure

Comments:

No response.

Track Record

12 What qualities should we look for in English Baccalaureate Certificates that will provide evidence that they will support students to be able to compete internationally?

Comments:

No response.

Assurance of literacy and numeracy

13 Do you agree that we should place a particular emphasis on the successful English language and mathematics qualifications providing the best assurance of literacy and numeracy?

Agree

Disagree

Not sure

Comments:

There is a lot more to mathematics than fluency in arithmetic. Requiring the new qualification to guarantee an individual candidate's numeracy may narrow the focus of the assessment to the point where it ceases to be a reliable indicator of their readiness to progress to their next stage of their mathematical education.

We are also concerned that placing a great deal of emphasis on numeracy could be interpreted as an admission of failure at earlier Key Stages and make it more difficult to convince international audiences that the new qualification is serious and rigorous.

Good literacy is critical for every student but we believe it is best assessed within English language examinations. Some of the recent functional mathematics questions have been excessively wordy to the point where the literacy demand has actually prevented candidates from demonstrating their command of mathematics.

School and Post-16 institution Support

14 In order to allow effective teaching and administration of examinations, what support do you think Awarding Organisations should be:

a) Required to offer?

Comments:

No response.

14 b) Prevented from offering?

Comments:

The consultation document suggests the provision of support should be limited to prevent 'teaching to the test'. Despite our concerns about 'teaching to the test', we do acknowledge that many teachers will continue to do so. It is vital therefore that the test itself provides a searching examination of a well-designed syllabus. We are concerned that restricting the availability of past papers, mark schemes and examiner reports may increase student anxiety, hinder independent study and widen the gap in educational opportunities.

We would, however, welcome an end to the endorsement of particular textbooks.

15 How can Awarding Organisations eliminate any unnecessary burdens on schools and post-16 institutions relating to the administration of English Baccalaureate Certificates?

Comments:

No response.

Qualification supports progression of lower achievers

16 Which groups of students do you think would benefit from a "Statement of Achievement" provided by their school?

Comments:

It could be argued that all students might benefit from a 'Statement of Achievement' and schools would understandably be reluctant to be seen to treat subgroups differently. Any such document would therefore need to be issued to the entire cohort.

17 How should we ensure that all students who would benefit from a "Statement of Achievement" are provided with one?

Comments:

A standard format for the 'Statement of Achievement' will need to be agreed or it will fail to gain recognition and currency.

Equalities

18 a) Do you believe any of the proposals in this document have the potential to have a disproportionate impact, adverse or positive, on specific pupil groups?

Adverse impact

Positive impact

Both

No impact

Comments:

The needs of low-attaining pupils (and a disproportionate number of these have difficult backgrounds) are not well-served by these proposals. It is currently possible for the weakest students to achieve a number of Level 1 GCSE passes but the narrow academic nature and increased rigour of the new examinations may make it more difficult for them to access progression pathways and become successful learners.

18 b) If they have potential for an adverse impact, how can we reduce this?

Comments:

The potential for an adverse impact could be minimised by widening the scope of the new qualifications to include creative and technological subjects.

Implementation

19 Should we introduce reformed qualifications in all six English Baccalaureate subjects for first teaching in secondary schools in 2015, or should we have a phased approach, with English, mathematics and sciences introduced first?

In all six subjects from 2015

Phased approach

Other

Comments:

The proposed changes to Key Stage 4 assessment are the most significant in a generation and we simply cannot afford for them to be botched or mishandled. The 2015 schedule is so ambitious that no time is available for reflection, refinement or piloting and this must significantly increase the risk of the new qualifications failing. A phased introduction is likely to confuse and disadvantage those students unfortunate enough to be caught in the transition.

The Mathematical Association believes that the whole suite of new qualifications should be introduced simultaneously and would recommend first teaching from 2017 to allow a short but critical period of trialling and development.

20 How best can we prepare schools for the transition to these reformed, more rigorous qualifications?

Comments:

Syllabuses and specimen assessment materials will need to be issued at the earliest possible opportunity and it would be incredibly helpful for schools to be granted a number of additional Professional Development Days so that colleagues may work together in teams to discuss the mechanics of implementation. In this current session, as new qualifications are unveiled in Scotland, teachers there have been given two additional Professional Development Days.

21 How long will schools need to prepare to teach these reformed qualifications?

Up to 12 months 12 - 18 months More than 18 months
 Other

Comments:

The pace of change in recent years has been relentless and teachers and school leaders have had no choice but to become resilient and responsive. So long as they are given the minimum of eighteen months' notice promised in the consultation document, schools will successfully manage the change.

Languages

22 Should all languages in which there is currently a GCSE be included in our competition?

Yes No Not Sure

Comments:

No response.

23 Should the number of languages for which English Baccalaureate Certificates are identified be limited? If so, which languages should be included?

Yes

No

Not Sure

Comments:

No response.

24 Given the potential number of new languages qualifications to be developed, should they be introduced to a later timescale than history and geography English Baccalaureate Certificates?

Yes

No

Not Sure

Comments:

No response.

Post-16

25 Should we expect post-16 institutions to be ready to provide English Baccalaureate Certificates at the same time as secondary schools?

Yes

No

Not Sure

Comments:

It would be sensible for the new qualifications to be introduced in the post-16 sector two years after they are first taught in schools. This will guarantee continuity for students who need to retake any of their GCSEs.

It could be argued that it might be beneficial to prepare adult learners for the new courses at the earliest opportunity but many post-16 institutions would understandably be reluctant to offer old and new courses simultaneously.

26 How best can we support post-16 institutions to prepare to provide English Baccalaureate Certificates?

Comments:

The consultation document identifies a shortage of suitably-skilled mathematics teachers in the further education sector but the problem is equally acute in many schools and is likely to become critical long before the target for a significant increase in uptake for post-16 mathematics is achieved. It is quite clear that major programmes for recruitment, retention and retraining need to be developed and implemented at the earliest opportunity.

Choosing the best qualification in each subject

27 Do you agree that five years is an appropriate period for the new qualifications to feature in the performance tables before the competition is rerun?

Agree

Disagree

Not sure

Comments:

A five year period may be too short as the lead-in time is such that it is probable that only one year of results will have been published before the competition needs to be rerun. There will inevitably be teething problems so it is quite possible that the original winner will lose the contract at renewal. Expert staff will inevitably leave to join the successful bidder and this could reduce the capacity of the original contractor to maintain the highest standard of delivery in the intervening years.

28 Please let us have your views on responding to this call for evidence (e.g. the number and type of questions, whether it was easy to find, understand, complete etc.).

Comments:

It is unfortunate that some of the most contentious parts of the consultation document (e.g. 5.18 and 5.19) do not have any associated questions. Our firmly-held view is that the syllabus (and consequently much of the operational curriculum) should not be in the gift of Awarding Organisations. The outcome of each competition will obviously depend on a number of factors and it is entirely possible that syllabus quality could end up being sacrificed for other features that are seen as desirable. To this end, The Mathematical Association would strongly support the formation of National Subject Committees to shape and approve all new syllabus proposals.

Thank you for taking the time to let us have your views. We do not intend to acknowledge individual responses unless you place an 'X' in the box below.

Please acknowledge this reply

Here at the Department for Education we carry out our research on many different topics and consultations. As your views are valuable to us, would it be alright if we were to contact you again from time to time either for research or to send through consultation documents?

Yes No

All DfE public consultations are required to meet the Cabinet Office [Principles on Consultation](#)

The key Consultation Principles are:

- departments will follow a range of timescales rather than defaulting to a 12-week period, particularly where extensive engagement has occurred before
- departments will need to give more thought to how they engage with and consult with those who are affected
- consultation should be 'digital by default', but other forms should be used where these are needed to reach the groups affected by a policy; and
- the principles of the Compact between government and the voluntary and community sector will continue to be respected.

Responses should be completed and emailed to the relevant consultation email box. However, if you have any comments on how DfE consultations are conducted, please contact Carole Edge, DfE Consultation Coordinator, Tel: 0370 000 2288 / email: carole.edge@education.gsi.gov.uk

Thank you for taking time to respond to this consultation.

Completed questionnaires and other responses should be sent to the address shown below by 10 December 2012

Send by post to:

Public Communications Unit
Level 1 Area C
Castle View House
East Lane Runcorn
WA7 2GJ

Send by e-mail to: KS4QualReform.CONULTATION@education.gsi.gov.uk