

Results of the consultation on revised A level subject content

**Recommendations to the Secretary of
State for Education from
Professor Mark E. Smith
March 2014**

Contents

Foreword.....	3
Introduction	4
High level messages from the consultation	6
Art and design subject content	9
Business subject content.....	10
Computer science subject content.....	12
Economics subject content.....	15
English language subject content	16
English literature subject content.....	17
English language and literature subject content	19
Geography subject content.....	20
History subject content	21
Science subject content	23
Sociology subject content.....	26
Overall conclusion.....	27
Annex A: Summary of responses to the consultation.....	29
Overall summary of responses.....	29
Art and design.....	30
Business Studies	31
Computing	33
Economics	35
English language	37
English literature	38
English language and literature	39
Geography.....	41
History	43
Science.....	45
Sociology	47
Annex B: List of organisations that responded to the consultation	49

Foreword

This report summarises the outcome of a review that I chaired, following the conclusion of a consultation on the proposed revised A level subject content for subjects planned for first teaching in September 2015.¹ The review involved the chief executives of the four main A level awarding organisations in England² and their subject experts, supported by Department for Education and Ofqual. Many of the same people were also involved in the original review of the content of A levels, which took place in the summer of 2013, examining a wide range of evidence especially from higher education. This led to the revised A level content which were consulted on towards the end of 2013.

The most recent part of that review, to which this report pertains, was put in place to consider the responses to the consultation on A level subject content. This report presents the findings of the consultation, the review panel's consideration of these findings and my recommendations to the Secretary of State for Education about the next steps concerning content. I am satisfied that this process has been robust and balanced in considering all of the issues that emerged from the consultation and I am pleased with the high level of engagement and detail that the review was able to achieve, both from those who responded to the consultation, and from awarding organisations who considered the responses. I also note the strong level of support both for the changes proposed, and the belief that the changes enhance the progression from A levels to higher education.



Professor Mark E. Smith, Vice-Chancellor, Lancaster University

March 2014

¹ The original review considered A levels in: art and design; biology; business studies; chemistry; computing; economics; English language; English literature; English language and literature; geography; history; mathematics; physics; psychology; and sociology. Mathematics was recommended for delay in implementation to September 2016, as part of the original review in the summer of 2013.

² The four awarding organisations are: OCR, AQA, Pearson, and WJEC.

Introduction

In March 2012, the Secretary of State for Education set out a programme of reform for A levels to help ensure that the qualifications better equip students for higher education. The Secretary of State aimed to give higher education a greater voice in the design and development of A levels. Representatives from higher education are well placed to know what skills and understanding A level students need to develop in order to progress to successful undergraduate study.

In March 2013, the Secretary of State confirmed his intention that new linear A levels should be available for first teaching from 2015. A review of A level subject content was therefore conducted between April and July 2013 by the four awarding organisations for 15 different A levels in England. This process drew on evidence from higher education representatives who had been consulted by awarding organisations either during or ahead of the review.

The review was independently chaired by Professor Mark E. Smith, Vice-Chancellor of Lancaster University, who made recommendations to Ofqual and the Secretary of State for Education about the scale of the work required to revise the content of each of the 15 A levels and the proposed timescale for first teaching. Work was then undertaken by awarding organisations to revise the content and reflect the changes put forward. The revised content were consulted on between 25th October and 20th December 2013. The Department for Education analysed the consultation responses and provided these to Professor Smith and the A level review panel, which was reconvened to consider the consultation response. This analysis can be found at annex A.

The review panel, which was again chaired by Professor Smith, was asked to:

- consider any equalities issues arising from the consultation;
- consider all content issues arising from the consultation by subject; and
- agree recommendations about whether a change to the subject content was needed in response to issues raised in the consultation.

The panel considered each of the issues raised through the consultation and any evidence provided in support. Changes were made to the subject content where specific points were judged to have merit based on the evidence provided, or to add value to the subject content.

This report records the conclusions of the A level review panel, and provides Professor Smith's recommendations to the Secretary of State for Education. It outlines the issues that emerged from the consultation on subject content and the changes made to the content as a result. It also recommends which AS and A levels can be developed for first teaching in schools by 2015 and which may need to be delayed. It has already been confirmed,

following the consultation, that the revised geography A level will be delayed, with first teaching in 2016.³

Some issues which arose fell outside the scope of the A level subject content consultation. Some were relevant to Ofqual's parallel consultation on A level regulatory requirements and assessment arrangements. Specifically, these concerned the reduction of coursework in English, and practical assessment in science. These issues will be addressed by Ofqual in its consultation response. The recommendations in this report concern subject content only. Any changes that emerge from the Ofqual consultation may have an impact on the timescales for reform.

In general, responses to the consultation were positive and provided helpful, detailed suggestions on how the subject content could be further improved. One issue which received particular mention was the decision taken in 2013 to decouple the AS qualification from the A level, making it a stand-alone qualification. This particular issue is outside the scope of the review and the recent consultation. Where the decoupling of AS and A levels has implications for content, for example, in relation to co-teachability, these are considered in this report. Awarding organisations reported that they were confident that the AS qualification and the A level could be co-teachable across all subjects. Overall, respondents were less positive about the appropriateness of the AS qualification than they were about the A level; this report recommends some changes to AS content where appropriate.

³ [Secretary of State's letter to Professor Smith accepting the recommendation that the new geography A level should be introduced for first teaching in schools from 2016.](#)

High level messages from the consultation

A wide range of people and organisations (291) responded to the consultation on the revised A levels. On the whole, the consultation response was positive and constructive, with many respondents highlighting useful minor amendments to improve the quality of the A level subject content, or triggering useful debate within the panel discussions. The issues that arose are dealt with in turn in each of the following subject sections.

Only a minority of respondents to the consultation (no more than 23% in any subject⁴) felt that the A level subject content was not appropriate. An even smaller minority (no more than 17% in any subject⁵) considered that the subject content did not better enable student progression to undergraduate study. This provided a firm foundation for the consideration of amendments to the A level content.

Across all subjects, a concern was raised about whether the AS and A level subject content offers progression from GCSE. GCSEs are currently being reformed, with English literature, English language and mathematics GCSEs available for first teaching from 2015, and a range of other subjects, including the EBacc subjects (history, geography, the sciences and languages) from 2016. The A levels that were the subject of the recent consultation will generally be available for first teaching in September 2015. Respondents wanted to ensure that the revised A levels took account of GCSE developments. The panel was confident that where content decisions had already been made (on GCSE English and mathematics) and proposals were available (on the EBacc subjects), these developments had been taken into account. However, the review panel was also clear that how this was approached varied by subject. In some cases, content would need to be repeated to allow for spiral learning and in other subjects, different levels of breadth or depth would be required. No evidence was submitted to the consultation that led the review panel to conclude that this would be problematic or limit progression. With the first cohort of students progressing from the new GCSEs due to start A level study in September 2017, opportunity remains to revisit this issue in the future and ensure the most appropriate progression from key stage 4 to 5.

The consultation response as a whole welcomed the increased emphasis on mathematical skills across all subjects, although some respondents felt that the mathematical content was either too hard or too easy. It was the view of the panel that the level of mathematics content has been set at the right level in each subject to better meet the requirements of higher education. In some cases, although the changes did not go as far as some

⁴ This excludes geography, where there was a much stronger feeling that the subject content is not appropriate and the subject has been recommended for deferred implementation in 2016. It also excludes computer science which is discussed in this document.

⁵ Same exclusions apply.

respondents would have liked, there is an increase in the volume, level of stretch and level of expectation regarding the application of mathematics from the current position. The application of mathematical content (how the mathematics content will be treated in the A level) often increases the level of demand. The review panel accepted that the standard of mathematics required was not sufficiently explicit and recommended that a statement should be added to each subject content, where appropriate, to clarify that the level of mathematical content will be at least level 2 (GCSE grade C or equivalent) and will be applied in the context of that A level.

The introduction of a new mathematics GCSE will change the nature of the demand at GCSE level. The review panel recognised the need to remain in step with these changes when defining the mathematical content for each subject. The introduction of a new 'Core Maths' qualification at level 3 also has potential to alter the way mathematical skills are embedded and utilised within A level courses. The panel therefore advocated that the mathematical content of A levels should be reviewed in due course as part of the post-qualifications review process, taking account of the experience of awarding the new qualifications and the admission on to the A level courses of students who have taken the new, more rigorous mathematics GCSE.

Respondents to the consultation often referred interchangeably to the subject content and the specification. This led to some points being made in the consultation which were outside the scope of the review (i.e. the comments were only really relevant in the context of the specification). These terms are defined below for clarity as they are referred to throughout this document:

- *Subject content* – refers to the subject of this consultation. The subject content is defined at a national level and sets out what A level or AS specifications for a particular subject need to include. The subject content and assessment objectives (the subject of Ofqual's parallel consultation) are used by Ofqual as the standard against which specifications are accredited. Since these are formally regulated against they need to be precise, which can perhaps result in them looking somewhat 'dry'. They are also not updated frequently and so need to be fit for purpose in the longer term.
- *Specifications* – produced by awarding organisations using the content and assessment objectives. These specify what the qualification will cover in detail and how the content will be assessed. They are used by schools and colleges to guide teaching of the subject and add the 'colour', depth and detail of the content students will study.

The review panel was mindful of the need to balance precision and specificity with the flexibility needed to allow awarding organisations to develop interesting, appealing and 'colourful' specifications that can be updated in response to developments in the subject as necessary. Awarding organisations undertook to consider those comments that were more

appropriate to the development of specifications, rather than the subject content, as they finalise their specifications prior to accreditation.

The review panel considered equalities issues where consultation responses raised specific concerns. In the majority of cases, the concerns were determined to be more appropriately dealt with during the development of the awarding organisation's specifications or through appropriate measures within the classroom. The Department for Education will publish a full equality impact assessment in due course which will include the review panel's assessment of the equalities issues raised in the consultation.

This document now considers each A level subject and the consultation responses relating to that subject. Substantive issues and themes emerging for each subject are dealt with in the main body of this report. Summaries, covering the full range of responses, are provided for each subject in Annex A of this report.

Art and design subject content

The new emphasis on drawing in the revised subject content for art and design was welcomed. Respondents queried whether the ability to now work entirely in digital media would undermine the emphasis on drawing. The review panel confirmed that drawing could include digital drawing. Further detail about expectations in relation to drawing will be provided in specifications.

Some respondents made specific suggestions to include or emphasise different content. All of these were carefully considered by the review panel, which concluded that the content as drafted strike the right balance between specificity and flexibility. Very specific areas, such as photography, were allowed, but should not be required.

Some specific amendments were agreed to the subject content, for example, to remove the word 'unendorsed' referring to one of the titles and replace it with a more suitable term that broadens the appeal of the qualification. In addition, some other minor changes have been made to tighten up the drafting of the subject content.

The panel considered the differentiation between the AS and A level and concluded this was appropriate.

A summary of the consultation responses for art and design is available at [Annex A](#) of this report.

Recommendation

The art and design subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by the autumn 2014, for first teaching in September 2015.

Business subject content

Respondents largely welcomed the increased mathematical content set out in the 'quantitative skills annex'. An additional statement will be added to the annex to make clear that the mathematical skills expected of students (set out in the annex) is at least at level 2 and will be applied in the context of the business A level.

Some specific amendments were suggested by some respondents. A small number suggested that the content needed updating to reflect current developments in business, including the digital revolution and social media. The review panel considered this suggestion carefully and agreed that some additional wording should be added to the subject content to set an expectation that contemporary business content should be explored through the AS and A level. The review panel agreed that this approach was preferred to including the specific suggestions, as it would ensure that specifications reflect whatever the current business developments are. The panel also considered the suggestion that human resource (HR) management should be included in the content as a topic for study. The existing topic, 'people in organisations', will encapsulate some of the concepts of HR management. The content allows for development of these concepts in specifications. Therefore, the panel concluded that no changes were needed.

The review panel discussed the feedback that the qualification is at risk of becoming overloaded if the 40% of unspecified content is used to introduce new content. The review panel confirmed that the 40% of unspecified content will be mainly used in the specifications to exemplify the content specified in the 60% core, but could also be used to introduce some new topics as a means of differentiating specifications. It concluded that this flexibility was desirable, but that awarding organisations should have regard to this concern as they develop their specifications.

Other respondents suggested that business accounts and setting up a new business should be added to the subject content as topics for study. It was felt that the existing subject content allows for these and other specific topics to be detailed in specifications. Given the risk of overloading the qualification, the panel concluded they should not be added to the content.

There was consensus among respondents to the consultation that the current business studies A level should be re-named 'business' and this change will be made to the final subject content.

A summary of the consultation responses for business is available in [Annex A](#) of this report.

Recommendation

The business subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by autumn 2014, for first teaching in September 2015.

Computer science subject content

The majority of respondents to the consultation did not believe that or were unsure whether the revised computer science A level subject content was appropriate in the light of the findings from the original review. Respondents, including the British Computer Society (BCS) and Computing at School (CAS), made a number of specific suggestions for improving the subject content. For example, they suggested that more emphasis should be placed on programming and that the 'computational thinking' annex should be renamed to better describe its content. As a result, the review panel agreed that it was important to improve the subject content to ensure that Ofqual can more effectively regulate it, and so that higher education institutions have a clear understanding of the skills and knowledge acquired by an A level student.

Therefore, awarding organisations worked closely with BCS and CAS to revise the subject content to take account of the issues they raised in their consultation response, as well as more widely by other respondents. Following this collaboration, the BCS and CAS wrote to AQA to confirm that, in the light of the revisions made, they were now happy to support the new subject content. Professor Smith then chaired a second meeting of the review panel to provide assurance that the consultation responses had been addressed in development of the subject content.

A significant number of respondents to the consultation thought more programming should be required as part of the A level and AS. Algorithms provide the rules for programming. The subject content has therefore been amended to place a much greater emphasis on developing knowledge and understanding of algorithms and, at A level, comparing complex algorithms. The aims and objectives of the subject content have also been amended to explicitly require A level and AS specifications to encourage students to develop "the ability to analyse problems in computational terms through practical experience of solving such problems, including writing programs to do so" (paragraph 3 of the subject content). This is followed through in expectations about programming set out throughout the subject content. The subject content requires both A level and AS students to design, write and test programs.

Respondents also suggested a range of topics to be added to the subject content, including how computers work and cyber security. The review panel considered these suggestions carefully and determined that the permissive nature of the subject content would allow these topics to be covered in computer science specifications. The review panel therefore concluded that they should not be explicitly named as additional topics. However, the review panel was mindful of the feedback from respondents that the content was too narrowly focused. Therefore, a number of amendments have been made to ensure the subject content of the AS and A level is logical and coherent, requiring specifications to cover all the key areas expected to allow progression to undergraduate study.

The 'computational thinking' annex has been renamed the 'mathematical skills' annex. This change reflects the comments from respondents that the term 'computational thinking' does not mean only mathematical skills. However, the content of the annex includes only mathematical content.

Respondents thought that the revised subject content was too focused on ICT. The review panel agreed that this was not the intention and therefore paragraph 4 was amended to rationalise and order the knowledge and understanding expected of all A level and AS students. The references to ICT-related knowledge and understanding that will not be covered in the computer science A level or AS were also removed.

There was no consensus in the consultation response about whether the volume and level of mathematical content set out in the subject content was correct. The review panel considered this issue, including in consultation with the BCS and CAS, and agreed that the mathematical topic 'algorithms' should be expanded to 'comparison of complexity of algorithms', and should be a requirement of A level specifications only. This represents an increase in the level of demand of the mathematical content for A level specifications, addressing the comments made by some respondents to the consultation that the mathematical content was insufficient and lacking in rigour. This will better support student progression to undergraduate study. The amended topic subsumes the topic 'Data types and data structures', which has been removed.

Some respondents felt that the subject content was too focused on software engineering and that this made the level of demand too great. The review panel agreed that this is a challenging expectation and the associated mathematical content could be beyond that expected for a level 3 qualification. Therefore, the explicit expectation that specifications must support students to develop knowledge and understanding of software engineering has been removed. In addition, the 'skills' section of the subject content has been amended so that it no longer implicitly encourages following a particular software development methodology. Instead, the content seeks to encourage an environment where the emphasis is on developing problem-solving skills and an understanding of concepts, in which students should be creative and able to think critically.

The review panel also addressed the response from a small number of respondents that the A level subject content does not reflect changes to key stages 1 to 4. The aims and objectives set out in the subject content have been amended to better reflect wording in the key stages 1 to 4 programme of study.

Some respondents to the consultation thought more distinction was needed between the AS and A level. The review panel was confident that this had now been addressed in the revised subject content. Paragraph 5, which sets out what knowledge and understanding A level specifications must require, has been added, building on the expectations set out in paragraph 4 for AS and A level specifications. Paragraph 7 has also been added to differentiate between the skills expected of AS and A level students. In addition, the

mathematical skills annex also now specifies which of the topics should be covered at A level compared to AS.

There was consensus among respondents to the consultation that the current computing A level should be re-named 'computer science' and this change will be made to the final subject content.

A summary of the consultation responses for computer science is available in [Annex A](#) of this report.

Recommendation

The computer science subject content should be revised in the light of the post-consultation review process (including the additional meeting held on 6 March to review the changes made to the subject content to take account of the detailed consultation responses). It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by autumn 2014, for first teaching in September 2015.

Economics subject content

A small number of stakeholders thought that the subject content for economics was at risk of being too large. The review panel noted that some topics had been added to the subject content, following the input of higher education contributors during the original review. Specifications will add information on the depth and detail of the content students will be required to study. The review panel agreed that the 40% of unspecified content outside the 60% specified in the subject content could be used both to exemplify existing content and to introduce some new topics to differentiate specifications. The panel was confident that the qualification would not be too large.

In contrast, some respondents suggested either additional topics, or that particular emphasis should be given to certain topics. The suggestions were considered carefully by the review panel, in light of the need to strike a balance between specificity and flexibility, and to avoid the risk of overloading the qualification. The panel concluded that there was insufficient evidence to support the addition of new topics, but noted the permissive nature of the content. On two specific suggestions, the review panel confirmed that there are references throughout the content to the global context (particularly in the table on page 4) and that explicit reference to evaluation and critical thinking throughout the content would ensure that students are required to effectively evaluate economic models.

A number of respondents believed that the increased emphasis on quantitative skills was good, but some called for more rigorous mathematics. The review panel noted that students who take economics A level progress to a wide range of economics degree courses, not all of which are mathematics-based. Therefore, it did not feel that it would be appropriate to increase the mathematical content beyond the current level. As outlined on page 5 of this report, the review panel agreed to add a statement to clarify the level of mathematics content required.

Some respondents thought that there was insufficient distinction between the AS and A level. The review panel thought that this view related more to the assessment objectives for economics than the subject content.

A summary of the consultation responses for economics is available in [Annex A](#) of this report.

Recommendation

The economics subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A levels by autumn 2014, for first teaching in September 2015.

English language subject content

In respect of the English language subject content, very few specific improvements were suggested by respondents.

Some stakeholders, at the consultation events, thought that the content could be amended to better reflect undergraduate study. The review panel considered their specific suggestions to place greater emphasis on sociolinguistics and discourse analysis, and include the application of linguistics in areas like psycholinguistics, corpus linguistics and natural language processing. The review panel agreed that as students progress from the English language A level to a wider range of degree courses than just linguistics, some of the areas suggested were too specialised for A level study and might not support progression to this wide range of degrees. The review panel confirmed, however, that if students are particularly interested in linguistics, there is flexibility for them to focus on this area in their independent study.

In response to consultation feedback, the review panel considered whether there was adequate distinction between the A level and the AS. The review panel agreed that the content did communicate the expectation that A level students will develop a deeper understanding of the same topics or areas compared to AS students (for example through the content at paragraphs 8, 9, 10 and 12). It did, however, agree that the wording at the start of paragraph 6 could be amended to make the distinction between AS and A level content clearer.

One minor change was agreed to address a specific suggestion to clarify that grammar includes morphology.

A summary of the consultation responses for English language is available in [Annex A](#) of this report.

Recommendation

The English language subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by autumn 2014, for first teaching in September 2015.

English literature subject content

A small number of respondents questioned whether the subject content for English literature prescribes the right number of texts at A level. This had been discussed in detail as part of the original review process. The review panel was confident that eight texts is the right number of texts for the new linear A level, to allow students the appropriate depth of study. Further breadth of study will be encouraged through the unseen text and coursework, rewarding those students who read more widely.

The inclusion of the unseen text was supported by respondents particularly as a means of encouraging wider reading. Some stakeholders were unsure whether this would be sufficient. The review panel confirmed that it had considered introducing a requirement for wider reading, but had concluded that this was not possible as it could not be assessed – hence the introduction of the unseen text. The review panel also confirmed that it will be in the interests of learners to read widely; those that do will increase their chances of accessing the higher level marks in the exam. The review panel felt that teachers play a key part in encouraging wider reading and their efforts will complement what is expected through the content and specifications.

A small number of stakeholders at the consultation events felt that the inclusion of a post-2000 text was too limiting, although other respondents were supportive of this change. The review panel agreed that the inclusion of a post-2000 text, likely to have been written in the student's own lifetime, would embed the sense that literature is a living subject. Subject experts were confident that there are plenty of excellent post-2000 texts for study and that as a result the requirement would not be limiting.

Some respondents argued that the definition of an influential text in translation might be too broad as currently worded in the content. The review panel discussed this point at length, but did not agree that the wording should narrow the range of texts that could be included. The review panel noted that the content would not permit modernised versions of older English texts as these are not translated from another language. The review panel agreed that the inclusion of texts – particularly plays – in translation in respected English literature degree courses is evidence of their merit in the study of English literature, and their inclusion in the A level would provide students with a good breadth of study.

Some stakeholders who attended the consultation events thought that it would be helpful in preparing students for undergraduate study if the content explicitly asked that students use secondary literary sources when considering how texts are interpreted by different readers. The review panel considered this suggestion carefully but noted that the revised content is permissive, allowing students to use secondary literary sources to show different interpretations. Requiring the use of secondary sources could discourage students from considering the ideas and different interpretations of their contemporaries.

Respondents suggested that a Shakespeare play should be required in the AS. The review panel again noted the permissive nature of the content, and the requirement for the study of Shakespeare at key stage 3 and GCSE. Bearing that in mind, the panel concluded that the inclusion of Shakespeare as a requirement at AS would unduly limit the breadth of study.

A summary of the consultation responses for English literature is available in [Annex A](#) of this report.

Recommendation

The English literature subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by autumn 2014, for first teaching in September 2015.

English language and literature subject content

Some respondents felt that the right balance had not been achieved between English language and literature content in the English language and literature A level. The review panel reiterated that English language and literature A level is not simply the combination of literature and language, but rather, is an integrated subject. The panel felt that concerns about the subordination of English language resulted from this misunderstanding. Taken as a whole, the review panel were clear that the content represents an appropriate balance between language and literature. Specifically, paragraph 4 of the subject content sets out clearly that the qualification is an integration of literature and language study.

A summary of the consultation responses for English language and literature is available in [Annex A](#) of this report.

Recommendation

The English language and literature subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by autumn 2014, for first teaching in September 2015.

Geography subject content

Respondents to the consultation, including the Royal Geographical Society and the Geographical Association, raised a number of fundamental issues about the content of the geography A level. Following detailed consideration of the consultation responses, there was a consensus that the fundamental nature of these issues meant that further significant work is needed to make the subject content fit for purpose. Stakeholders' main concerns with the revised subject content were that it does not include enough physical geography; the content is outdated; and the level of challenge in the A level was not high enough, especially in the light of the proposed new GCSE content. The weight and quality of the evidence arising from the consultation have led to the conclusion that these issues are real, and that further significant work, including with key stakeholders and higher education, will be needed to consider and resolve the core issues raised.

As a result Professor Smith wrote to the Secretary of State on 4 February to confirm his recommendation that the revision of this A level should be delayed to allow this significant work to take place. The Secretary of State wrote back to Professor Smith to accept this recommendation and these letters were published on Friday 14 February.⁶

A summary of the consultation responses for geography is available in [Annex A](#) of this report.

Recommendation

The geography A level subject content should be delayed to proceed for first teaching in September 2016, rather than September 2015, to allow the fundamental issues arising from the consultation to be addressed.

⁶ [Secretary of State's letter to Professor Smith accepting the recommendation that the new geography A level should be introduced for first teaching in schools from 2016.](#)

History subject content

The requirement to study “topics from a chronological range of at least 200 years” (see paragraph 6 of the history subject content) was discussed at length in the post-consultation review process. There was no consensus of opinion amongst respondents about whether this was the right requirement. The review panel understood from stakeholders that there were two breadth-related issues in relation to this requirement that were becoming conflated. First, the panel needed to consider whether the requirement relating to the study of change over time set an appropriate time period. Secondly, the panel needed to consider whether the 200-year requirement would ensure that students were required to study a breadth of history.

On the first of these issues, the review panel agreed that retaining the 100-year minimum for the study of change over time was the appropriate timespan, and would ensure that students are required to have a broad understanding of a longer historical period. On the second issue, the 200-year requirement would ensure that students did not just study one century of history.

The panel was mindful of the risk raised by some stakeholders that students could potentially study an A level focusing primarily on a single century of history. For example, a specification could focus on twentieth-century history and only superficially touch on history from before this century. Panel members were clear that the reformed A level should avoid this. The review panel discussed whether it would be possible to define more clearly what is meant by a ‘topic’, for example, its scope or the length a topic should be. It concluded that it was not possible to establish a consistent definition that would work for every historical period. The review panel did, however, feel that the 200-year requirement would mean that awarding organisations would need to set ‘rules of combination’ in their specifications, indicating which options may be taken together. This, together with the requirement to provide a “broad and coherent course of study” (paragraph 3 of the subject content), should provide some mitigation against the risk identified by stakeholders. The content requires awarding organisations to “include a rationale for the specification of topics including periods and/or themes which indicate how the [following] criteria for content are addressed” (paragraph 2 of the subject content). The review panel felt that this would reinforce the need for specifications to provide a defensibly coherent study of history.

Some specific changes to the subject content were agreed to clarify the requirements from a regulatory perspective. For example, amending the wording in paragraph 2 to ensure that the rationale provided includes the topics specified to meet the requirements of paragraph 6 as well as periods and/or themes. The post-qualifications review process, which Ofqual will establish, involving ALCAB and others, could helpfully investigate whether the intended outcome has been achieved through the combination of these measures.

Respondents were broadly content that the revised subject content offers breadth, but were concerned it may not offer enough depth. The review panel concluded that features of the

content would require study of topics in depth, particularly the requirement to study short-term change over a period of time and the explicit reference in the content to the requirement to study “aspects of the past in breadth and in depth” (paragraph 5 of the subject content).

Respondents were generally supportive of the reduction in the minimum amount of British history (from 25% to 20%) to be included in the A level. Consultation responses said there was now a good balance between European, world and British history. This addresses the feedback received from higher education representatives in the original review.

Stakeholders were concerned that the requirement for students to study “the history of more than one country or state” (paragraph 5 of the subject content) could be met by studying two countries from the British Isles (i.e. England and Ireland). The review panel was clear that this was not its original intention and an amendment to the subject content was agreed to clarify that the requirement would involve the study of history of at least one country or state outside the British Isles. The review panel also confirmed that the wording ‘country or state’ would allow specifications to meet the requirement through the study of non-modern and non-western civilisations.

The continued inclusion of the historical enquiry in the A level was welcomed by respondents. They felt that this provides the opportunity for students to develop critical thinking and investigation skills which are needed for study at university.

In response to the concern raised by respondents that the subject content does not differentiate sufficiently between the AS and A level, the review panel agreed that paragraph 8 of the subject content should be revised to clarify the difference between expectations of A level and AS students.

A summary of the consultation responses for history is available in [Annex A](#) of this report.

Recommendation

The history subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by autumn 2014, for first teaching in September 2015.

Science subject content

Respondents generally welcomed the increased mathematical content within the science content, but some respondents suggested specific additions. Following detailed consideration, the review panel agreed to add standard deviation to the biology section of the mathematical annex for A level students, as there was widespread agreement that this statistical test should have been part of the expectations for A level students originally. It was also agreed that the expectations of students in relation to statistics would be revisited and clarified. In relation to physics, the review panel accepted feedback from respondents that it would be difficult to teach the current subject content without the use of the concepts underlying calculus. The mathematical annex has been revised to make clear that students will be expected to understand and apply these concepts. It was agreed that other suggestions, such as error analysis in chemistry and interpretation of graphs and tables in psychology, were already covered in the existing subject content.

Some stakeholders felt that the mathematical content of the revised A levels was too low at 20% in chemistry and 10% in biology, reflecting recommendations from the [SCORE 'mathematics in science'](#) report that science A levels should have a greater mathematical content (2010). In terms of the level of mathematics, the review panel noted that the SCORE report counted mathematics below level 2 (i.e. below grade C at GCSE) in its assessments, whereas the figures used in the consultation were intended to refer to mathematical content of at least level 2, applied in the context of the A level. A statement will be added to the mathematical annex to make this clear. Only mathematics at level 2 or above will be considered to contribute to these percentage requirements. The panel considered this to represent an appropriate level of mathematical challenge at A level. Taking that into account, the review panel concluded that the maths content was set at the right level.

Consideration was given to the point raised by some respondents that the revised A level and AS subject content needs to be coherent with the new mathematics A level (currently being reformed by ALCAB for first teaching in 2016). The review panel noted that the science A levels need to stand alone, as not all students taking science A levels will be taking A level mathematics. Detailed consideration had been given to what mathematical content would be needed in the science subjects and awarding organisations were confident that these requirements met the needs of universities.

In response to some suggestions that the 'big ideas' in science from the GCSE should be followed through into the A level and AS, there was a consensus that these concepts could be explored through specifications under the revised subject content. The purpose of the A level is to support progression to higher education by deepening students' understanding. The review panel agreed that while the broader 'big ideas' are specified and introduced at GCSE, the A level did not need to specifically include them again as the revised subject content already allows these to be covered in much greater depth. The review panel also

felt that the specifications were the right vehicle to contextualise the subject content through the use of contemporary examples. This would help to address the concerns of the small number of respondents who worried that the subject content was dry and old-fashioned.

In response to the cross-cutting concern raised by a small number of respondents that the A level subject content must also provide progression from dual science as well as triple science, some additional wording was added to make this clear. This was always the intention.

There was a strong consensus that the balance of the qualification with 60% core and 40% unspecified content was the correct balance to allow awarding organisations to develop interesting and appealing specifications which are sufficiently diverse so as to offer a choice to schools and colleges. The review panel carefully considered the concern expressed by some respondents that the introduction of new content, through the 40% of unspecified content, would make the qualification too large. The 40% will be used not only to introduce some new content, but also to exemplify existing content including applying it in a relevant scientific context. Awarding organisations will take into account this concern as they develop their specifications, but a decision was taken not to specify more precisely in the content how the 40% will be derived.

In relation to biology, a small number raised concerns about the wide breadth of the subject content and worried it was at the expense of depth. On the other hand, some respondents suggested the inclusion of other topics, such as human physiology. The review panel was conscious of the need to balance these views. Biology A level supports progression to a wide range of undergraduate courses, from environmental science to medicine. Too much emphasis on any one area could undermine progression to this range of courses. The review panel also thought that the broad purpose of the biology A level meant that there was unlikely to be a consensus in the scientific community on which topics to remove, if new topics were to be added. The review panel therefore took the decision that the topics currently included in the subject content did not need further revision. Two specific wording changes were made to the subject content to correct and clarify the content following detailed consideration of the amendments suggested by the Society of Biology.

In relation to physics, specific suggestions were made by respondents about additional topics to include in the subject content. As with biology, there was no consensus regarding these additional topics. The review panel felt that the addition of new topics would result in the A level becoming too large. The panel noted the permissive nature of the content, which would allow the suggested topics to be included in specifications for physics A level under the 40% of unspecified content. The panel concluded that there should be no change to the topics covered. Three specific wording changes were made to the subject content to correct and clarify the content, following detailed consideration of the amendments suggested by the Institute of Physics.

For chemistry, five specific wording changes were made to the subject content to correct and clarify the content, following detailed consideration of the amendments suggested by the Royal Society of Chemistry.

In relation to psychology, the inclusion of specific topics was suggested by a small number of respondents. Neuroscience was a topic suggested by more than one respondent. Due consideration was given to these suggestions, and to the need to make sure that the content allows students to gain a broad understanding of the subject needed for progression to higher education. Again, the panel noted the permissive nature of the content, which would allow for coverage of neuroscience. It could also be covered under biological psychology. No changes were made to the topics included in the subject content. One specific wording change was made to correct and clarify the content, following detailed consideration of the amendments suggested by the British Psychological Society.

SCORE raised a significant concern about how the content of the working scientifically annex could be assessed. The panel considered the detailed response from SCORE and asked subject experts to divide the current annex into a clearer explanation of content which can be directly assessed through an exam, and content which cannot. Subject experts have produced a revised and clearer working scientifically annex for biology, chemistry and physics. This annex sets out the skills and competencies that contribute towards practical mastery which can be assessed through written examinations (5a of the Working Scientifically Annex) and those that will be assessed by teachers through appropriate practical activities (5b of the Annex). It also sets out minimum expectations of the practical activities that specifications must give students the opportunity to develop, including that students must carry out a minimum of 12 practical activities (5c of the Annex). These are based on a list proposed by the Gatsby Foundation in response to the consultation. The review panel considered that the approach taken in the working scientifically annex for the other sciences would not be suitable for psychology. The review panel agreed that the content should include a sentence outlining expectations in relation to investigative activities in A level psychology, whilst not proposing specific assessment based on those activities.

A summary of the consultation responses for the science subjects is available at [Annex A](#) of this report.

Recommendation

The science A level subject content (covering biology, chemistry, physics and psychology) should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for these AS and A levels by autumn 2014, for first teaching in September 2015.

Sociology subject content

A small number of respondents suggested specific amendments to the sociology subject content. However, the review panel agreed that the subject content strikes the right balance between specificity and flexibility. On this basis, and the fact that there was no consensus on the topics suggested, it was agreed that no changes were needed to the subject content.

A small number of respondents welcomed the emphasis on quantitative skills. The review panel revisited this and concluded that they were content with the statistical skills expected of sociology students. The review panel concluded that no annex was needed to set out the quantitative skills expected of students in sociology. This had not been raised as necessary by contributors from higher education.

A summary of the consultation responses for sociology is available in [Annex A](#) of this report.

Recommendation

The sociology subject content should be revised in the light of the post-consultation review process. It should then proceed for publication in spring 2014. This will allow awarding organisations to develop, gain accreditation for, and publish their specification for this AS and A level by the autumn 2014, for first teaching in September 2015.

Overall conclusion

Of the 15 A levels that were considered by the original review in the summer of 2013, 14 were revised and consulted upon in the autumn. At that stage, the mathematics A level was delayed to September 2016 for first teaching, and is now being considered by ALCAB.

Following the consultation and detailed consideration of the content issues that arose by the review panel, the recommendations of this review are:

- 13 of the 14 subjects can be progressed for first teaching in September 2015.
- Geography should be delayed to 2016 based on the responses to the consultation, which raised fundamental issues that will require significant work to address.

These recommendations are made following consideration of the A level subject content only. In parallel, Ofqual is considering the A level assessment objectives and its decisions may have an impact on timescales.

A level Subject	Progress for first teaching in September 2015	Delay to first teaching in September 2016
Art and Design	✓	
Biology	✓	
Business	✓	
Chemistry	✓	
Computer Science	✓	
Economics	✓	
English Language	✓	
English Literature	✓	
English Language and Literature	✓	
Geography		✓
History	✓	
Physics	✓	
Psychology	✓	
Sociology	✓	

It is the conclusion of this review that the revised A levels have the potential to better meet the needs of higher education. Overall, the changes were received positively by the majority of stakeholders. Key issues identified in the consultation have been dealt with. The post-consultation process, used to consider the consultation responses, has been effective, with the views of higher education contributors gathered in the original review process, reflected by awarding organisations, and with high engagement from awarding organisations. The further changes made, as a result of the post-consultation review process, add value to the revised subject content and all of the main issues identified in the consultation have been considered and addressed.

Annex A: Summary of responses to the consultation

The Department for Education provided a summary of the issues raised in the consultation by subject and by question and provided it to the review panel. These summaries are provided below. The summaries did not include any issues mentioned by respondents which were outside the scope of the review – for example, issues raised on the assessment of A levels, which was the subject of Ofqual’s consultation, or on the decoupling of the AS and A level qualification, upon which a decision was taken in March 2013.

Overall summary of responses

There were 291 responses to the consultation. Throughout this document, unless otherwise specified, percentages⁷ are a proportion of the responses to each question, rather than a proportion of the total number of responses to the consultation. The majority of respondents were from schools or colleges as shown in the table below. A significant proportion of respondents were from ‘other’ interested organisations, examples of which can be found at Annex B.

Options	Responses	
School:	109	37%
Other:	74	25%
College:	48	16%
University:	26	9%
Academy:	18	6%
Learned Society:	12	4%
Higher Education Institution:	4	1%

In addition to the written consultation, Ofqual and the Department for Education ran a number of consultation events to discuss the proposals. 44 people attended these, including representatives from subject associations and higher education institutions.

⁷ Percentages have been rounded to the nearest whole number.

65% of respondents to the written consultation on the revised A level subject content also indicated that they would be responding to Ofqual’s parallel consultation on A level assessment objectives and arrangements.

Overall, respondents were positive about the proposals being consulted upon. This is reflected in the breakdown of responses for each subject set out below.

Art and design

Question (Q) 1: Is the revised A level content in art and design appropriate in view of the issues identified in Professor Smith’s report? Please provide evidence to support your response.

There were **54** responses to this question and 65% of respondents agreed that the revised A level content was appropriate.

Options	Responses		Across Consultation
Yes:	35	65%	12%
No:	8	15%	3%
Not Sure:	11	20%	4%

The specific emphasis on drawing was explicitly welcomed by 19% of respondents. Five respondents raised a specific issue relating to the relationship between the increased emphasis on drawing and the ability for students to now work entirely in digital media.

It was noted by six respondents that the content was very similar to the current A level which works well. Five respondents welcomed the new ability for students to work entirely in digital media. Five respondents explicitly made specific suggestions to include or emphasise different content, such as more emphasis on digital technology e.g. photography. This latter point was echoed in the consultation events where stakeholders also suggested that the use of the word ‘might’ in the revised subject content made it unclear what was required.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)?

There were **47** responses to this question, and 77% agreed that the content enables students to progress to undergraduate study.

Options	Responses		Across Consultation
Yes:	36	77%	12%
No:	5	11%	2%
Not Sure:	6	13%	2%

Six respondents explicitly mentioned that the increased emphasis on drawing would help students progress to higher education, as this skill is often asked for at undergraduate level.

As in question 1, four respondents explicitly mentioned that the current A level enables progression to undergraduate study, and that as the proposed A level is similar, this remains the case.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

40 respondents answered this question and 57% of respondents felt that the revised AS qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	23	57%	8%
No:	5	13%	2%
Not Sure:	12	30%	4%

Three respondents mentioned that there was little differentiation between the A level and AS content, however, two of these respondents stated that this was the right approach as the assessment objectives made the distinction between the different levels of skill and knowledge required.

Business Studies

Q1: Is the revised A level content in business studies appropriate in view of the issues identified in Professor Smith's report? Please provide evidence to support your response.

There were 49 responses to this question with 65% agreeing that the proposed content was appropriate.

Options	Responses		Across Consultation
Yes:	32	65%	11%
No:	10	20%	3%
Not Sure:	7	14%	2%

Of the 49 people who responded to this question, eight explicitly welcomed the increased mathematical content in business studies. However, four respondents raised a concern that the increased maths content might make the subject less accessible to students.

Seven people suggested specific amendments or asked for additional content on specific areas, however suggestions varied and there was no consensus about what these additions should be, although business accounts and setting up a new business was mentioned by more than one respondent. In addition, stakeholders who attended the consultation events felt that some of the content needed updating to reflect current developments in business.

Stakeholders who attended the consultation events also suggested that the unspecified 40% of the qualification should be used to exemplify or apply the specified content in context, rather than introduce new content, to avoid the overall qualification becoming too large.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)? Please provide evidence to support your response.

There were **43** responses to this question with 70% indicating that the revised subject content for business studies would enable progression to undergraduate study.

Options	Responses		Across Consultation
Yes:	30	70%	10%
No:	3	7%	1%
Not Sure:	10	23%	3%

Of the 43 respondents to this question, four people explicitly welcomed the increased mathematical content as in question one. Three welcomed the good range of topics included for study.

Q3: Are the new names for the A level subject content in Business studies (changed to 'Business') and Computing (changed to 'Computer science') appropriate? Please provide evidence to support your response.

There were **78** responses to this question with 79% indicating that they agreed with the proposed new names for the subjects.

Options	Responses		Across Consultation
Yes:	62	79%	21%
No:	8	10%	3%
Not Sure:	8	10%	3%

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

There were **41** responses to this question with 41% indicating they thought the AS qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	17	41%	6%
No:	10	24%	3%
Not Sure:	14	34%	5%

Of the ten respondents who said that the AS qualification was not appropriate, six elaborated on their answer, indicating that they would like specific topics to be included in the AS subject content. However, the suggestions varied and there was not any consensus from respondents.

Computing

Q1: Is the revised A level content appropriate in view of the issues identified in Professor Smith's report? Please provide evidence to support your response.

There were **48** responses to this question with 46% expressing the view that the revised computing subject content was appropriate.

Options	Responses		Across Consultation
Yes:	22	46%	8%
No:	16	33%	5%
Not Sure:	10	21%	3%

38% of respondents to this question explicitly made specific suggestions to include or emphasise different content, with half of these suggesting the subject content needed to include more programming. Suggestions for other additional topics varied and there was no consensus about what these additions should be, although an understanding of how computers work and cyber security were each mentioned by two respondents.

In addition, stakeholders who attended the consultation events felt that it should be made clear that computational thinking skills does not just include mathematics. This view was reinforced by two respondents who, along with stakeholders at the event, suggested renaming the ‘computational thinking’ skills annex to ‘mathematics’ annex as the annex focused more on mathematics.

Five respondents thought that the content was too narrowly focused, particularly on ICT and software engineering, and should be broadened. This was again echoed by stakeholders at the consultation events, who felt that the content was related more to ICT or Computing, than Computer Science.

Five respondents supported the increased mathematics in the content; however a further five thought the mathematics was insufficient and lacking in rigour.

Of those responding ‘No’ or ‘Not Sure’, 31% (eight) cited a concern over a lack of programming, 23% (six) felt the content was too narrow and 19% (five) thought there was insufficient mathematics.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)? Please provide evidence to support your response.

There were **44** responses to this question with 52% of respondents indicating that they believed the revised subject content for Computing would enable students to progress to undergraduate study.

Options	Responses		Across Consultation
Yes:	23	52%	8%
No:	9	20%	3%
Not Sure:	12	27%	4%

25% of respondents thought that further amendments were necessary to better support progression to undergraduate study, with six respondents stating that there should be more emphasis on programming as undergraduates need to be competent programmers. Other respondents mentioned a variety of other potential additions, but with no clear consensus.

As in question one, six respondents thought that the content was too narrow, with two respondents stating that it was too focused on software engineering. Stakeholders at the consultation events also suggested that the focus on software engineering may make the qualification too demanding for a level 3 qualification.

Six respondents thought that the content needed more mathematical rigour and made a range of different suggestions for additional mathematics.

Two respondents thought that the A level subject content did not reflect changes to computing at key stages 1 to 4, this point was echoed by stakeholders at the consultation events.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

There were **42** responses to this question with 38% believing that the AS subject content in computing was appropriate.

Options	Responses		Across Consultation
Yes:	16	38%	5%
No:	11	26%	4%
Not Sure:	15	36%	5%

Seven respondents that thought more distinction was needed between the AS and A level, a small number (two) mentioned that this could cause issues with the ability to co-teach the qualifications.

Four people thought that the content was too narrow, and suggested including a range of additional topics. Three respondents mentioned that more programming would be useful.

Economics

Q1: Is the revised A level content in economics appropriate in view of the issues identified in Professor Smith’s report? Please provide evidence to support your response?

53 respondents answered this question and over half of the respondents, 66%, agreed that the revised A level content was appropriate.

Options	Responses		Across Consultation
Yes:	35	66%	12%
No:	10	19%	3%
Not Sure:	8	15%	3%

Of the 53 people who responded to the question, six respondents explicitly welcomed the increased emphasis on quantitative skills.

Eight respondents welcomed the changes to the subject content as bringing the subject up to date, welcoming specific additions such as the inclusion of financial economics and greater historical content.

21% of respondents, and stakeholders at the consultation events, suggested that certain content be given additional emphasis or included. Suggestions varied widely and included, for example, global economics, distributional and equity issues, and evaluating economic models, but there was no overall consensus.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)?

There were **50** responses to this question and 66% of respondents agreed that the revised specification would enable progression to undergraduate study.

Options	Responses		Across Consultation
Yes:	33	66%	11%
No:	3	6%	1%
Not Sure:	14	28%	5%

As in question one, the increased emphasis on numeracy was viewed positively, with 11 respondents explicitly welcoming it. However, six respondents suggested that more rigorous mathematics should be required, with two mentioning that universities are still likely to require A level maths for economics courses.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

43 respondents answered this question and 58% of respondents felt that the revised AS qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	25	58%	9%
No:	8	19%	3%
Not Sure:	10	23%	3%

A small number of respondents (three) felt that the content may be too large. Stakeholders who attended the consultation events also suggested that the unspecified 40% of the qualification should be used to exemplify or apply the specified content in context, rather than introduce new content, to avoid the overall qualification becoming too large. Another small number (two) felt that it would be helpful to provide more distinction between AS and A level content.

English language

Q1: Is the revised A level content in in English Language appropriate in view of the issues identified in Professor Smith’s report? Please provide evidence to support your response?

48 respondents answered this question and well over half of the respondents, 69%, agreed that the revised A level content was appropriate.

Options	Responses		Across Consultation
Yes:	33	69%	11%
No:	10	21%	3%
Not Sure:	5	10%	2%

Of the respondents who agreed that the content was appropriate 10 explicitly commented that the revised subject content was similar to the current subject content, or that the minor revisions as outlined in Professor Smith’s report, for example, to clarify and update language levels to include pragmatics, had improved it.

There was no consistent reason given by those who disagreed, or were not sure that the content was appropriate.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)?

There were 40 responses to this question and 68% indicated that the revised subject content for English language A level enables progression to undergraduate study.

Options	Responses		Across Consultation
Yes:	27	68%	9%
No:	3	8%	1%
Not Sure:	10	25%	3%

Stakeholders at the consultation events felt that the content could better reflect undergraduate study and made specific suggestions to include or emphasise different content, for example the application of linguistics in psycholinguistics, corpus linguistics and natural language processing.

However, of those who answered ‘no’ to this question there was no consensus about what changes were necessary.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

38 respondents answered this question and 47% of respondents agreed that the revised AS qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	18	47%	6%
No:	5	13%	2%
Not Sure:	15	39%	5%

Five respondents, four of whom responded 'no' or 'not sure' to this question, felt that more clarification of the distinction between AS and A level was needed or required more details of the AS requirements.

English literature

Q1: Is the revised A level content in English literature appropriate in view of the issues identified in Professor Smith's report? Please provide evidence to support your response?

61 respondents answered this question and well over half of the respondents, 67%, agreed that the revised A level content was appropriate.

Options	Responses		Across Consultation
Yes:	41	67%	14%
No:	10	16%	3%
Not Sure:	10	16%	3%

Ten respondents explicitly welcomed the addition of the unseen text. On the specified texts, eleven explicitly welcomed either the number, the historical coverage of the text, the inclusion of a text in translation or the inclusion of a contemporary text.

Five respondents felt that there were too many texts prescribed and more flexibility was needed for schools, while conversely four expressed concern over the reduction of the number of texts. Five respondents explicitly disagreed with the historical coverage and inclusion of the text in translation – though there was no consensus about whether there were too many or too few pre-1900 texts. Some stakeholders who attended the consultation events also questioned whether the definition of a modern text as needing to be post-2000 was too limiting, and were also concerned that the definition of an 'influential' text in translation may be too broad.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)?

There were **53** responses to this question and 64% of respondents agreed that the content enables progression to undergraduate study.

Options	Responses		Across Consultation
Yes:	34	64%	12%
No:	8	15%	3%
Not Sure:	11	21%	4%

As in question one, nine respondents supported the addition of the unseen text element, commenting that this would encourage students to read more widely and independently, and better prepare them for the breadth and challenges of undergraduate study.

Stakeholders who attended the consultation events also commented that it would help prepare students for undergraduate study if the content explicitly asked that students use secondary literary sources when considering how texts are interpreted by different readers.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

45 respondents answered this question and 40% of respondents felt that the revised AS qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	18	40%	6%
No:	11	24%	4%
Not Sure:	16	36%	5%

Of those respondents who replied 'no' or 'not sure' to this question, a number of specific amendments were proposed, including three respondents who suggested that a Shakespeare play should be required at AS level.

English language and literature

Q1: Is the revised A level content in English language and literature appropriate in view of the issues identified in Professor Smith's report? Please provide evidence to support your response?

38 respondents answered this question and over half of the respondents, 63%, agreed that the revised English language and literature A level subject content was appropriate.

Options	Responses		Across Consultation
Yes:	24	63%	8%
No:	8	21%	3%
Not Sure:	6	16%	2%

Of those who did not think the content was appropriate, or were not sure, two felt that the right balance had not been achieved between English Language and Literature in the content.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)?

There were **35** responses to this question with 57% of respondents indicating that the revised subject content will enable progression to undergraduate study.

Options	Responses		Across Consultation
Yes:	20	57%	7%
No:	4	11%	1%
Not Sure:	11	31%	4%

Of the small number of people who provided written responses to this question, five explicitly mentioned why they thought that the revised content would provide progression to undergraduate study, for example a better integrated approach across literature and language, and sustained independent study.

Of those who responded 'no' or 'not sure' to this question, three mentioned that it was difficult to judge whether the content would enable progression to undergraduate study without seeing the full A level specifications.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

29 respondents answered this question and 48% of respondents felt that the revised AS qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	14	48%	5%
No:	4	14%	1%
Not Sure:	11	38%	4%

Very few people provided written responses to this question and there was no clear consensus from the respondents replying 'no' as to why they felt the AS qualification content was not appropriate.

Geography

Q1: Is the revised A level content in geography appropriate in view of the issues identified in Professor Smith's report? Please provide evidence to support your response.

There were **96** responses to this question and 44% thought the revised geography A level content was appropriate in view of the issues identified in Professor Smith's report.

Options	Responses	Across Consultation
Yes:	42	44%
No:	34	35%
Not Sure:	20	21%

23% of respondents indicated that the revised A level is too similar to or repetitive of GCSE subject content. 15% said that the revised A level subject did not provide progression from GCSE and six indicated that the A level was not demanding enough.

These issues mirrored those raised at the consultation events, where stakeholders expressed significant concerns, and suggested that more fundamental changes were needed to the current geography A level than had been recommended by the Smith Review. Their concerns included that the revised content did not include enough physical geography, was outdated and lacked clarity; that the level of challenge was not high enough; and that requirements for key higher skills (such as critical, synoptic and relational thinking) were insufficient.

16% of consultation respondents welcomed the increased emphasis on fieldwork and supported fieldwork as a component of both A level and AS.

14% of respondents welcomed the increased emphasis on mathematical skills, although seven respondents argued that there was insufficient demand in the mathematical content and three respondents argued there was too much mathematical content. Stakeholders from the consultation events felt that the quantitative annex included too many geographical skills rather than quantitative skills.

13% supported the idea of core content and 14% welcomed the emphasis on physical geography.

15% of respondents suggested a wide range of amendments.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)? Please provide evidence to support your response.

There were **85** responses to this question with 45% answering that the revised A level content in geography will enable students to progress to undergraduate study.

Options	Responses		Across Consultation
Yes:	38	45%	13%
No:	28	33%	10%
Not Sure:	19	22%	7%

The main issue highlighted by respondents to the consultation is that the revised A level content is repetitive of GCSE and does not provide progression from GCSE. 34% highlighted this as a serious concern. Of the 19 respondents who did not think the revised geography subject content would enable progression to undergraduate study, six were from universities and these respondents all stated that the lack of progression from GCSE as the reason.

Respondents welcomed the reintroduction of the written project (12%), supported the identification of quantitative skills to be covered (12%) and welcomed the greater emphasis on fieldwork skills (12%). Eight respondents welcomed the 50/50 balance between human and physical geography.

Eight respondents explicitly suggested specific amendments, with some supporting the Royal Geographical Society's response to the consultation.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

There were **62** responses to this question with 40% indicating that they did not think that the AS geography qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	19	31%	7%
No:	25	40%	9%
Not Sure:	18	29%	6%

Five respondents thought that the separation of AS and A level subject content as currently drafted will cause difficulties, making the qualifications difficult to co-teach.

Five people thought that fieldwork should be assessed in the AS level as well as the A level.

History

Q1: Is the revised A level content in history appropriate in view of the issues identified in Professor Smith’s report? Please provide evidence to support your response.

There were **69** responses to this question. Just under half of respondents (49%) thought that the revised history A level content was appropriate.

Options	Responses		Across Consultation
Yes:	34	49%	12%
No:	16	23%	6%
Not Sure:	19	28%	7%

The new requirement for A level students to study “topics from a chronological range of at least 200 years” was most often mentioned in respondents’ comments, including by the Royal Historical Society and the Historical Association. However, there was no consensus about whether the requirement was the right one. Nine of the 69 respondents to this question explicitly said that a range of 200 years was too broad, making it impossible to cover the topics in sufficient depth. In comparison, seven said that the range of 200 years is too narrow and arbitrary.

Of the 19 respondents who did not agree with the content, over a third cited the 200-year requirement as the reason. Some suggested other approaches, including a requirement to study topics before and after a certain date, to study more than one period, to study a continuous period of 200 years or giving schools more flexibility to set their own curriculum.

The reduction in the minimum amount of British history required of the A level also attracted comment from respondents to this question. Eight of the 69 respondents to this question explicitly mentioned that they were supportive of the reduction, with some stating that they believed that a good balance was now struck between European, world and British history.

Ten respondents suggested some specific amendments to the subject content; however, there was not any consensus from respondents and suggestions varied.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)? Please provide evidence to support your response.

There were **64** responses to this question with 56% answering that the revised A level content in history will enable students to progress to undergraduate study.

Options	Responses		Across Consultation
Yes:	36	56%	12%
No:	8	13%	3%
Not Sure:	20	31%	7%

Only three universities responded to this question: one felt that the new subject content would enable students to progress to undergraduate study, one did not and one was not sure. The majority of respondents were from schools, Academies or colleges.

Eight (13%) of the 64 respondents to this question explicitly mentioned that they were supportive of the historical enquiry as providing an opportunity for students to develop the critical thinking and investigation skills needed for undergraduate study.

Six respondents explicitly stated that the revised subject content offered appropriate breadth for students preparing for undergraduate study.

As with question one, there were different views expressed about the 200-year requirement. Some respondents thought the 200-year requirement was too wide a scope for A level. Others worried that the 200-year requirement would achieve breadth but at the expense of depth.

Five respondents suggested specific amendments to the subject content which mirror those provided under question one.

Other key issues raised during the consultation events by stakeholders included: questioning whether the content should include modern representations of the past, that political history should be emphasised and that inclusion of the phrase 'state or country' could imply an emphasis on western modern history that may not be appropriate.

Of the eight respondents to the consultation who said the revised subject content would not enable progression to undergraduate study, the most common reason cited was that the revised subject content pursues breadth at the expense of depth.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

There were **58** responses to this question with 34% indicating that they thought the AS history qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	20	34%	7%
No:	11	19%	4%
Not Sure:	27	47%	9%

Of the 11 respondents who said they did not think the AS qualification content in history was appropriate, three of the four who explained their answer raised the concern that the proposed content did not sufficiently differentiate between AS and A level and argued that it may make it potentially difficult to co-teach AS and A level.

Science

Q1: Is the revised A level content in science appropriate in view of the issues identified in Professor Smith’s report? Please provide evidence to support your response.

There were **113** responses to this question and 63% of respondents to the question indicated that the science A level subject content was appropriate.

Options	Responses		Across Consultation
Yes:	71	63%	24%
No:	22	19%	8%
Not Sure:	20	18%	7%

14% of respondents welcomed the inclusion of more mathematical and practical components, including the identification of key skills.

Six respondents were concerned there might not be a sufficient level of coherence or progression between the new Science A levels, GCSEs and the new mathematics A level as they are not being reformed or introduced together. Five respondents felt that it would be helpful to emphasise ‘the big ideas’ in science as in the GCSE – this was echoed by stakeholders at the consultation events.

Three respondents explicitly expressed cross-cutting concerns about the subject content and suggested further amendments. These were echoed by stakeholders at the consultation events and included:

- ensuring the content provides progression from dual science students as well as triple science.
- Using the unspecified 40% of the qualification to exemplify or apply the specified content in context, rather than introduce new content, to avoid the overall qualification becoming too large.

Of those who responded ‘no’ or ‘not sure’, four explicitly raised concerns about the biology content – for example that it was too broad to allow sufficient depth or that the mathematics content was too advanced. Three respondents also felt that greater emphasis on human physiology would be helpful.

At the stakeholder events, however, chemistry and biology stakeholders felt that the amount of mathematics (20% and 10% of the A level respectively) was too low, and in Biology too easy, and provided evidence to support their assertion.

Five respondents thought that increased mathematic rigour and content was needed in physics. Seven respondents made specific suggestions to include or emphasise different content; this was echoed by stakeholders at the physics event. Suggestions included particle physics, optics, lens and mirror formulae. Of those respondents who responded ‘no’ or ‘not sure’, three respondents explicitly mentioned that they felt that the content was dry and old-fashioned.

Only three respondents explicitly made specific suggestions to include or emphasise different content in psychology – these varied but included, for example, neuroscience.

Stakeholders at the consultation event echoed concerns raised about the content and level of maths. Suggestions included:

- for chemistry – calculus and error analysis;
- for biology – standard deviation and calculating uncertainties;
- for psychology – the interpretation of graphs and tables; and
- for physics – calculus.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)? Please provide evidence to support your response.

There were **103** responses to this question with 56% indicating that the revised science A level will enable progression to undergraduate study.

Options	Responses		Across Consultation
Yes:	58	56%	20%
No:	17	17%	6%
Not Sure:	28	27%	10%

Five of the seven universities that answered this question thought that content supported progression.

As mentioned in question one above, 15% of respondents thought that the proposed content, which included more mathematical and practical components and identification of key skills, would support progression.

36% of respondents answering ‘no’ or ‘not sure’ explicitly made specific suggestions to include or emphasise different content. A range of topics and skills were suggested including more demanding mathematical skills particularly in physics and biology (five

respondents) physiology and anatomy in biology (three respondents) and electronics in physics (two respondents). However, there was no strong consensus among respondents about what amendments were needed.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

There were **86** responses to this question and 63% of respondents thought that the AS content was appropriate.

Options	Responses		Across Consultation
Yes:	54	63%	19%
No:	15	17%	5%
Not Sure:	17	20%	6%

12% of respondents thought there had been no significant change to the current AS content; however, roughly half of these respondents thought this approach was a good one and the half thought the opposite.

19% of those answering ‘no’ or ‘not sure’ explicitly made specific suggestions to include or emphasise different content; however there was no consensus about what change was necessary.

Sociology

Q1: Is the revised A level content in sociology appropriate in view of the issues identified in Professor Smith’s report? Please provide evidence to support your response?

There were **42** responses to this question and 60% of respondents agreed the revised sociology A level content was appropriate.

Options	Responses		Across Consultation
Yes:	25	60%	9%
No:	8	19%	3%
Not Sure:	9	21%	3%

Nine respondents to this question made specific suggestions to include or emphasise different content – for example culture and identity – however there was no consensus about what change was necessary.

Q2: Will the revised A level content enable students to progress to undergraduate study (particularly study in the same subject)?

There were **41** responses to this question and 54% of respondents agreed the revised subject content would enable progression to undergraduate study.

Options	Responses		Across Consultation
Yes:	22	54%	8%
No:	6	15%	2%
Not Sure:	13	32%	4%

As with question one, six respondents made specific suggestions to include or emphasise different content – for example, the sociology of youth and new technologies – however there was no consensus about what change was necessary.

The current emphasis on quantitative skills was welcomed by three respondents.

Q4: Is the revised AS qualification content appropriate? Please provide evidence to support your response.

There were **31** responses to this question, and just under half of the respondents, 45%, felt that the revised AS qualification content was appropriate.

Options	Responses		Across Consultation
Yes:	14	45%	5%
No:	5	16%	2%
Not Sure:	12	39%	4%

Of those respondents who replied 'no' or 'not sure' to this question, very few explained their answer and where they did there was no consensus as to what changes would be needed.

Annex B: List of organisations that responded to the consultation

The following list excludes respondents who asked for their response to be confidential or who responded as individuals to the consultation rather than on behalf of an organisation.

Advisory Committee on Mathematics Education (ACME)

Alleyn's School

Alton College

Association of Colleges

Association of School and College Leaders (ASCL)

Bablake School

Barton Peveril Sixth Form College

Better History Forum

Bexhill College

Biddenham International School

Brighton Hove and Sussex Sixth Form College

British Computer Society (BCS)

Computing At School (CAS)

British Film Institute

British Humanist Association

British Psychological Society

Buckinghamshire County Council

Cambridge University

Cheltenham College

Chetham's School of Music

Citizenship Foundation

Council for College and University English

Crafts Council

Cultural Learning Alliance

Dame Allan's Schools

Democratic Life

Durham University (Geography department)
Economics, Business & Enterprise Association
Edgbaston High School for Girls
Education for Engineering (E4E)
Esher College
e-skills UK
Esri UK Ltd
Farlington School
Federation of Small Businesses
Field Studies Council
Francis Holland School
Gatsby Charitable Foundation
Geographical Association
George Spencer Academy
Girls' Day School Trust
Greenhead College
Headington School
Hills Road Sixth Form College
Howard of Effingham School
Independent Schools Religious Studies Association (ISRSA)
Institute of Mathematics and its Applications
Institution of Engineering and Technology
Jewish Community Secondary School (JCoSS)
John Innes Centre
Leeds City Council School Improvement
London School of Economics (Geography department)
Long Road Sixth Form College
Luton Sixth Form College
Magdalen College School
Medical Schools Council
National Association for the Teaching of English (NATE)

National Society (Church of England)
National Union of Teachers (NUT)
Nower Hill High School
Oxford, Cambridge and RSA Examinations (OCR)
Ordnance Survey
Parmiter's School
Pearson, Edexcel
Peter Symonds College
Portsmouth College
Portsmouth High School-GDST
Queen Mary University of London (Geography department)
Queen's University Belfast
Royal Economic Society
Royal Geographical Society (with the Institute of British Geographers)
Royal Historical Society
Royal Meteorological Society
Royal Statistical Society
Runshaw College
Salters Horners Advanced Physics Project, University of York Science Education Group
Salters-Nuffield Advanced Biology Project, University of York Science Education Group
Scarborough Sixth Form College
Science Community Representing Education (SCORE)
SGS College
St Paul's School
St Philomena's School
Sunderland College
Surrey Secondary Heads' Phase Council
The Association for Science Education's Outdoor Science Working Group
The Communication Trust
The Dyslexia-SpLD Trust
The English Association

The Falcon School
The Haberdashers' Aske's Boys' School
The Higher Education Academy (HEA)
The Historical Association
The King's School, Gloucester
The National Society for Education in Art and Design (NSEAD)
The Natural History Museum
The Perse School
The Royal Grammar School
The University of Nottingham
The Wessex Group of Sixth Form Colleges
Totton College
UK Forum for Computing Education (UKforCE)
University of Central Lancashire
University of Exeter (Geography department)
University of Leeds (Geography department)
University of York
Imperial College London
Voice
Welsh Joint Education Committee (WJEC)
Woodkirk Academy
Xaverian College

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