

Developing new GCSEs, AS and A level qualifications for first teaching in 2017

Analysis of the consultation on assessment arrangements

Part 1 of 3

December 2015

Ofqual/15/5810

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Executive summary

Background

From 16 July to 24 September 2015, Ofqual undertook a consultation on *Developing new GCSE, AS and A level qualifications for first teaching in 2017*. This was the first in a series of three consultations and covered the following subjects and qualifications:

- Reformed GCSEs: astronomy; business; economics; engineering; geology; psychology and sociology; and
- Reformed A levels and AS qualifications: design and technology; environmental science, history of art, music technology and philosophy.

The remaining subjects and qualifications being reformed for first teaching from 2017 are subject to separate consultations in 2015. A list of these subjects is presented in Appendix 2.

The consultation sought views and feedback on the proposed assessment arrangements (exam and/or non-exam based as appropriate), assessment objectives, and whether GCSEs in these subjects should be tiered. It also sought feedback on the equality impact of the proposals in relation to individuals who share a protected characteristic¹.

Following a tendering process, Pye Tait Consulting was contracted by Ofqual to undertake the analysis of responses to this consultation. Responses were logged by Ofqual and handed over to Pye Tait Consulting for impartial analysis and anonymous reporting in line with the Data Protection Act 1998 and Market Research Society (MRS) Code of Conduct.

Ofqual invited responses through a variety of media, including submission of an online, electronic or paper copy of the completed consultation questionnaire; via email or other hard copy correspondence.

¹ Protected characteristics include: Age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion and belief; sex; and sexual orientation.

Overview of Responses

In total, 121 valid consultation responses were analysed to inform this report, of which 115 (95%) were received in the form of completed questionnaires and six as free-format letters and/or supporting correspondence.

- Response levels vary considerably for each subject, ranging from four respondents (GCSE Engineering and GCSE Sociology) to 42 respondents (AS and A level Design and Technology);
- Just under two thirds of respondents (64%) provided personal (individual) views and the remainder (36%) provided official (organisation-level) views;
- Of the 78 personal responses received, the majority (76%) are from teachers, 14% from education specialists and the remainder from students, parents, carers and other individuals; and
- Of the 43 organisation-level responses received, just under half (46%) are from schools or colleges, 37% from representative bodies, 12% from awarding organisations and 5% from private training providers.

Further information about the profile of respondents is provided in Appendix 1.

Key Findings

- Based on responses to the Likert-scale questions ('strongly agree' to 'strongly disagree'), the majority of respondents are in agreement with Ofqual's proposals with respect to the majority of subjects. These findings should be treated with caution given the considerable differences in base respondent numbers per subject.
- Most respondents generally support Ofqual's proposals not to tier these subjects, with the main arguments being that this will open up opportunities for all students to achieve the best possible grades and that there is already a successful track record of these subjects not having been tiered in the past.
- The most common area of disagreement relates to Ofqual's proposals to reduce the proportion of non-exam assessment for certain subjects following their reform.

- Subjects where there is greatest concern associated with reducing the proportion of non-exam assessment include GCSE business, AS and A level environmental science, GCSE geology, and AS and A level music technology.
- For the above-mentioned subjects, official responses from subject associations and schools, as well as personal responses from teachers, are the main sources of objection to these proposals.
- For GCSE business, respondents have argued how coursework and controlled assessment promote research and investigation skills, including customer research, and enable their learning to be linked to the real business world.
- For GCSE geology, non-exam assessment is considered important to assessing the types of practical skills that form the basis of a career in this field.
- For AS and A level environmental science, it was pointed out that not including a practical component would be at odds with other core science-based qualifications, potentially implying that practical work is less valuable in this subject.
- For AS and A level music technology, respondents emphasised the importance of assessing the practical processes involved and that the subject needs to more closely resemble the world of work with greater focus on non-exam assessment.
- A number of specific suggestions have been given for enhancing the assessment objectives in certain subjects – primarily by awarding organisations and subject associations. These are set out in the main body of the report.
- Comments on the equality impact of Ofqual's proposals principally focused on the need to ensure sufficient provisions are in place to support students with mental health and learning disabilities such as dyslexia, specifically where exam-based assessments can prove more challenging than project-based work.

GCSE astronomy

A total of nine respondents answered the Likert-scale consultation questions relating to this subject. More than half (55%) agree that astronomy should be assessed entirely by exams although 44% disagree. Two thirds (66%) agree that it should not be tiered.

A similar majority (56%) agree that the proposed assessment objectives are appropriate and two thirds (66%) agree that the proposed weighting of assessment objectives is appropriate.

GCSE business

A total of 14 respondents answered the consultation questions about this subject. Of these, half (50%) agree that the subject should be assessed entirely by exams, while 43% disagree. The vast majority (86%) agree that it should not be tiered.

Just under three quarters (71%) believe the proposed assessment objectives – as well as their respective weightings – are appropriate.

AS and A level design and technology

Based on 34 respondents who answered the specific consultation questions relating to this subject, just over three quarters (76%) agree that the available marks should be equally split between exam and non-exam assessment for both qualifications, while 24% disagree for AS level and 21% for A level.

Almost two thirds (65%) agree that the proposed assessment objectives are appropriate and similar proportions agree that the proposed weightings of the assessment objectives are appropriate (64% for AS level and 63% for A level).

GCSE economics

Of the seven respondents who answered the consultation questions relating to this subject, all are in agreement that the subject should be assessed entirely by exams, that it should not be tiered, that the proposed assessment objectives are appropriate, and that the proposed weighting of assessment objectives is appropriate

GCSE engineering

Four respondents answered the consultation questions relating to this subject, with three generally in agreement with Ofqual's proposals.

One respondent disagrees with the proposal that 60 per cent of the available marks should be allocated to exams and 40 per cent to non-exam assessment. One also disagrees that GCSEs in engineering should not be tiered.

AS and A level environmental science

Seven respondents answered the consultation questions on this subject. More than half (58%) agree that these qualifications should be assessed entirely by exams and that the proposed assessment objectives are appropriate. Two thirds (67%) agree that the proposed weightings of the assessment objectives are appropriate for AS qualifications, which is similar to A levels (66%)

GCSE geology

Views are divided with respect to Ofqual's proposal to assess this subject entirely by exams. Based on the views of six respondents, half agree, while half strongly disagree.

All respondents agree that GCSE geology should not be tiered and the majority (at least 80%) agree that the proposed assessment objectives, as well as the weightings of those assessment objectives, are appropriate.

AS and A level history of art

Six respondents answered consultation questions relating to AS and A level history of art. While all agree that the AS qualification should be assessed entirely by exams, only 36% agree that this approach should be taken for the A level (50% disagree).

Two thirds (67%) agree that the proposed assessment objectives are appropriate for both qualifications and the same proportion also agree that the weightings of those assessment objectives are appropriate.

AS and A level music technology

A total of 25 respondents answered the consultation questions relating to this subject. The majority (68%) disagree that 60 per cent of the marks should be

allocated to exams and 40 per cent to non-exam assessment with respect to both qualifications. The majority view appears to favour more emphasis on non-exam based assessment.

Respondents are generally favourable towards the proposed assessment objectives, with 71% agreeing that they appropriate. Two thirds (66%) agree that the proposed weightings of the assessment objectives are appropriate at AS level while 60% agree that the weightings are appropriate at A level.

AS and A level philosophy

Based on 18 respondents answering consultation questions relating to this subject, almost three quarters (72%) agree that these should be assessed entirely by exams, with 17% disagreeing.

Two thirds (67%) agree that the proposed assessment objectives are appropriate for both qualifications, with 17% disagreeing. A slightly narrower majority agree that the proposed weightings of the assessment objectives are appropriate for AS levels (54%) and A levels (51%). Just under two thirds (32%) disagree with the proposed weightings of the assessment objectives for both qualifications.

GCSE psychology

Based on six respondents answering the consultation questions on this subject, two thirds (66%) agree that the qualification should be assessed entirely by exams and 83% agree that it should not be tiered.

All respondents agree that the proposed assessment objectives are appropriate and 80% agree that the proposed weightings of the assessment objectives are appropriate.

GCSE sociology

Four respondents answered consultation questions relating to this subject. With the exception of one respondent disagreeing that assessment should be wholly examination-based, there is general agreement that sociology should not be tiered, that the proposed assessment objectives are appropriate, and that the proposed weightings of the assessment objectives are appropriate.

1. Introduction

1.1 Background and context

In February 2013 the Secretary of State for Education initiated reform of GCSE, AS and A level qualifications.

The reform of GCSEs is intended to make them more challenging so pupils are better prepared for further academic or vocational study, or for work. They should also provide a basis for schools and colleges to be held accountable for the performance of their students².

The reform of AS and A levels is to make sure they properly equip students for higher education and to provide a strong foundation for onward employment. Post-16 courses of study aim to be internationally comparable in developing knowledge, skills and understanding³.

Ofqual is responsible for ensuring that the reformed GCSE, AS and A level qualifications are of the right standard and have regard to Government policy aims. GCSE and AS/A level qualifications are being reformed in three phases. The first phase will begin teaching in September 2015, the second phase from September 2016 and the third phase from September 2017.

This consultation analysis relates to the third phase and is the first in a three-part series of reports. The third phase includes 13 GCSEs, one GCSE short course and 16 AS/A level qualifications⁴ which will begin first teaching in September 2017. The first AS awards for these qualifications will take place in summer 2018 and the first GCSE and A level awards will be given in summer 2019. A list of these subjects is presented in Appendix 2.

Ofqual is hosting three public policy consultations in 2015 relating to the phase three qualifications⁵. Each consultation covers a specific tranche of subjects and seeks views on assessment arrangements (including exam and/or non-exam based assessment, as appropriate), assessment objectives, and whether the GCSEs in these subjects should be tiered. Ofqual is also seeking feedback on the equality

² <https://www.gov.uk/government/policies/reforming-qualifications-and-the-curriculum-to-better-prepare-pupils-for-life-after-school/supporting-pages/gcse-reform>

³ <https://www.gov.uk/government/policies/reforming-qualifications-and-the-curriculum-to-better-prepare-pupils-for-life-after-school/supporting-pages/a-and-as-level-reform>

⁴ Correct at the time of writing.

⁵ Live dates for Ofqual's consultations covering the phase three subjects and qualifications: Consultation 1 – live from 16th July to 24th September 2015; consultation 2 – live 10th September until 5th November 2015; consultation 3 – live from 29th October until 4th January 2016.

impact of the proposals in relation to individuals who share a protected characteristic⁶.

This report relates to the first tranche of the phase three qualifications:

- Reformed GCSEs: astronomy; business; economics; engineering; geology; psychology and sociology; and
- Reformed A levels and AS qualifications: design and technology; environmental science, history of art, music technology and philosophy.

The remaining subjects and qualifications being reformed for first teaching from 2017 are subject to separate consultations in 2015.

The findings of this consultation will inform Ofqual's decisions on the structure and assessment of these qualifications.

The Department for Education (DfE) is leading on the development of subject content, with Higher Education Institutes (HEIs). The DfE has therefore conducted a separate consultation on the subject content for these qualifications.

Ofqual plans to consult separately on the technical regulatory requirements that exam boards wishing to design, deliver and award these qualifications must meet. It is intended that the exam boards will develop new qualifications in the subjects listed above ready for first teaching by schools and colleges from September 2017. The exam boards' specifications, to be taught from that date, should be available to schools and colleges from autumn 2016.

1.2 Summary of proposals

This section presents a summary of Ofqual's proposals as part of this consultation. Full details are provided in the consultation document: *Developing new GCSE, AS and A level qualifications for first teaching in 2017 (part 1)*⁷.

1.2.1 Changes to assessment arrangements

In order to strike a better balance between exam and non-exam assessment, Ofqual proposes three main changes to the way reformed qualifications in these subjects should be assessed:

⁶ Protected characteristics are as follows: Age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion and belief; sex; and sexual orientation.

⁷ The consultation document is available here: <https://www.gov.uk/government/consultations/development-of-new-gcses-and-a-levels-for-teaching-from-2017>

1. To define the percentage of marks to be allocated to exam and non-exam assessment, removing or reducing any current flexibility and promoting comparability between exam boards;
2. To reduce or maintain the proportion of non-exam assessment that has been previously permitted in GCSEs, AS and A levels; and
3. To remove non-exam assessment from subjects where the content can be assessed by exam.

Where non-exam assessments are used, Ofqual will work with the exam boards to make sure that appropriate and robust arrangements are put in place. These will include the introduction of external marking where practical, strengthening the moderation of teacher marking where that is used, and other measures aimed at reducing incidents of malpractice.

1.2.2 Changes to assessment objectives

The assessment objectives for each subject describe the principal abilities that students taking that qualification must be given the opportunity to develop and demonstrate. The assessment objectives have a key regulatory role in ensuring that:

- Students are assessed on the relevant abilities for the subject and on an appropriate balance of those abilities; and
- Requirements are comparable between different exam boards' qualifications, and over time.

Ofqual has worked with subject and assessment experts to develop and improve the current assessment objectives. In revising these, Ofqual has aimed to make sure they are as clear as possible and that they:

- Fulfil their core purpose of describing the abilities that a student taking the relevant qualification should be required to demonstrate;
- Specify only the abilities that students should be required to demonstrate, not the content itself;
- Relate to each qualification as a whole, and so address the full range and balance of abilities that are relevant;

- Are sufficiently precise and detailed that they can be used consistently for setting and evaluating assessments;
- Provide a degree of flexibility in their application to enable alternative approaches where these are legitimate; and
- Promote progression between GCSEs, AS and A levels.

1.2.3 Tiering of GCSEs

Ofqual previously confirmed that new GCSEs should only be tiered where a single set of assessments cannot, in a valid and manageable way, assess students across the full ability range⁸.

None of the GCSE subjects included in this consultation are currently tiered. Ofqual proposes that the new (reformed) GCSEs in these subjects should not be tiered either.

1.3 Overview of the consultation, analysis and reporting

1.3.1 Acquisition of responses

The consultation document explained the proposed assessment arrangements and featured a questionnaire for individuals or organisations to complete and return. In addition, or as an alternative to completing the questionnaire, Ofqual invited responses via email or letter.

Responses were logged by Ofqual and handed over to Pye Tait Consulting for impartial analysis and anonymous reporting in line with the Data Protection Act 1998 and Market Research Society (MRS) Code of Conduct.

Responses were received in a combination of ways, including:

- Completion of an online version of the consultation questionnaire;
- Submission of an electronic copy (Word/PDF) or printed copy of the consultation questionnaire;
- Email (with or without the enclosure of an electronic copy of the consultation questionnaire in MS Word/PDF format); and

⁸ Ofqual set out the technical issues and arguments for and against tiering as part of its June 2013 consultation on new GCSEs.

- Letter (with or without the enclosure of a completed hard copy of the consultation questionnaire).

The scale and format of consultation responses is presented in Section 2.

1.3.2 Analysis and reporting

This report presents the findings from the formal consultation questionnaire and summarises views and feedback raised via emails and letters. A combination of tables, charts and textual analysis is used to collate and set out the findings.

Chapters 3 to 14 present the findings for each subject in turn. Each chapter begins with a summary of the subject-specific proposals, followed by the Likert-scale question responses in visual chart form (i.e. those questions asked on a scale from 'strongly agree' to 'strongly disagree'). Percentages may not always add up to precisely 100% due to the effect of rounding.

Within each chart, the base number of responses to each question is shown in brackets. It should be noted that base numbers shown in the charts only include responses to the Likert-scale questions and do not take account of any additional free-format responses.

Each chart is followed by a descriptive account of all respondents' views and opinions as they relate to the assessment arrangements for that subject. A selection of quotations is also included to illustrate the main findings.

Given the relatively low volume of responses received for most subjects (see Table 7) cross-tabulations of responses to the Likert-scale questions (e.g. by type of respondent) have not been performed as this would not be sufficiently robust and meaningful. However, the descriptive analysis of respondents' supporting comments does draw these distinctions where possible.

2. Summary of consultation responses

2.1 Overview

In total, 121 valid consultation responses were analysed to inform this report, of which 115 (95%) were received in the form of completed questionnaires and six as free-format letters.

- Response levels for each subject vary considerably, ranging from four respondents (GCSE engineering and GCSE sociology) to 42 respondents (AS and A level design and technology).

Just under two thirds of total respondents (64%) provided personal (individual) views and the remainder (36%) provided official (organisation-level) views (Table 1).

Table 1 Personal or official response

Personal response	78	64%
Official response	43	36%

Base: 121 respondents

Of the 78 personal responses received, the majority (76%) are from teachers, 14% from education specialists and the remainder from students, parents, carers and other individuals (Table 2).

Table 2 Type of personal respondent

Student	2	3%
Parent or carer	3	4%
Teacher (but not responding on behalf of a school)	59	76%
Educational specialist	11	14%
Other ⁹	3	3%

Base: 78 respondents

Of the 43 organisation-level responses received, just under half (49%) are from schools or colleges, 37% from representative bodies, 12% from awarding organisations and 5% from private training providers (Table 3).

⁹ Types listed as 'other' included a food technologist working within the food industry; as well as a non-qualified teacher fulfilling a lecturing role.

Table 3 Type of official respondent

Awarding organisation	5	12%
Local authority	0	0%
School or college	21	49%
Academy chain	0	0%
Private training provider	1	2%
University or other higher education institution	0	0%
Employer	0	0%
Government department, agency or organisation	0	0%
Other representative or interest group	16	37%

Base: 43 respondents

NB: Four of the five Awarding Organisations that responded are recognised by Ofqual to provide general qualifications. The fifth respondent is recognised by Ofqual to provide vocational qualifications

Based on 20 official responses from schools and colleges, a mix of school and college 'types' are represented (Table 4).

Table 4 Type of school or college

Comprehensive or non-selective academy	5	25%
State selective or selective academy	0	0%
Independent	8	40%
Special school	2	10%
Further education college	0	0%
Sixth form college	5	25%

Base: 20 respondents

Based on 16 responses from representative bodies, three quarters (75%) are from subject associations or learned societies (Table 5).

Table 5 Type of other representative or interest group

Group of awarding organisations	0	0%
Union	1	6%
Employer or business group	2	13%
Subject association or learned society	12	75%
Equality organisation or group	0	0%
Other ¹⁰	1	6%

Base: 16 respondents

¹⁰ Type listed as 'other' included an 'education charity'.

Further information about the profile of consultation respondents is presented in Appendix 1.

2.1 Responses by subject and qualification

The breakdown of total responses by subject is shown in Table 6. Where one individual/organisation provided a response in relation to more than one subject, each response from the same individual/organisation has been included within the total count per subject.

The AS and A level qualifications in design and technology attracted the highest proportion of responses (27%) followed by AS and A level qualifications in music technology (17%).

Table 6 Total responses by subject and qualification

Total responses	157	100%
GCSE astronomy	11	7%
GCSE business	13	8%
AS and A level design and technology	42	27%
GCSE economics	7	5%
GCSE engineering	5	3%
AS and A level environmental science	9	6%
GCSE geology	7	4%
AS and A level history of art	6	4%
AS and A level music technology	28	17%
AS and A level philosophy	19	12%
GCSE psychology	6	4%
GCSE sociology	4	3%

Table 7 shows the breakdown of total responses by subject and type of official respondent. Table 8 shows the same breakdown by type of personal respondent.

Table 7 Total responses by subject and type of official (organisation-level) respondent

	Total responses	Awarding organisation	School or college	Private training provider	Other representative or interest group
Total responses	72	23	21	2	26
GCSE astronomy	3	1	1	-	1
GCSE business	6	4	1	-	1
AS and A level design and technology	14	3	5	1	5
GCSE economics	3	2	-	-	1
GCSE engineering	4	2	-	-	2
AS and A level environmental science	6	2	-	-	4
GCSE geology	5	1	-	-	4
AS and A level history of art	4	1	2	-	1
AS and A level music technology	13	-	9	-	4
AS and A level philosophy	7	1	3	1	2
GCSE psychology	4	3	-	-	1
GCSE sociology	3	3	-	-	-

Table 8 Total responses by subject and type of personal respondent

	Total responses	Student	Teacher (but not responding on behalf of a school)	Educational specialist	Other (please state below)
Total responses	85	7	62	13	2
GCSE astronomy	8	1	3	4	-
GCSE business	7	-	6	1	-
AS and A level design and technology	28	-	24	3	1
GCSE economics	4	-	2	2	-
GCSE engineering	1	-	1	-	-
AS and A level environmental science	3	1	2	-	-
GCSE geology	2	1	-	1	-
AS and A level history of art	2	-	2	-	-
AS and A level music technology	15	1	10	2	2
AS and A level philosophy	12	1	11	-	-
GCSE psychology	2	1	1	-	-
GCSE sociology	1	1	-	-	-

3. GCSE astronomy

3.1 Overview

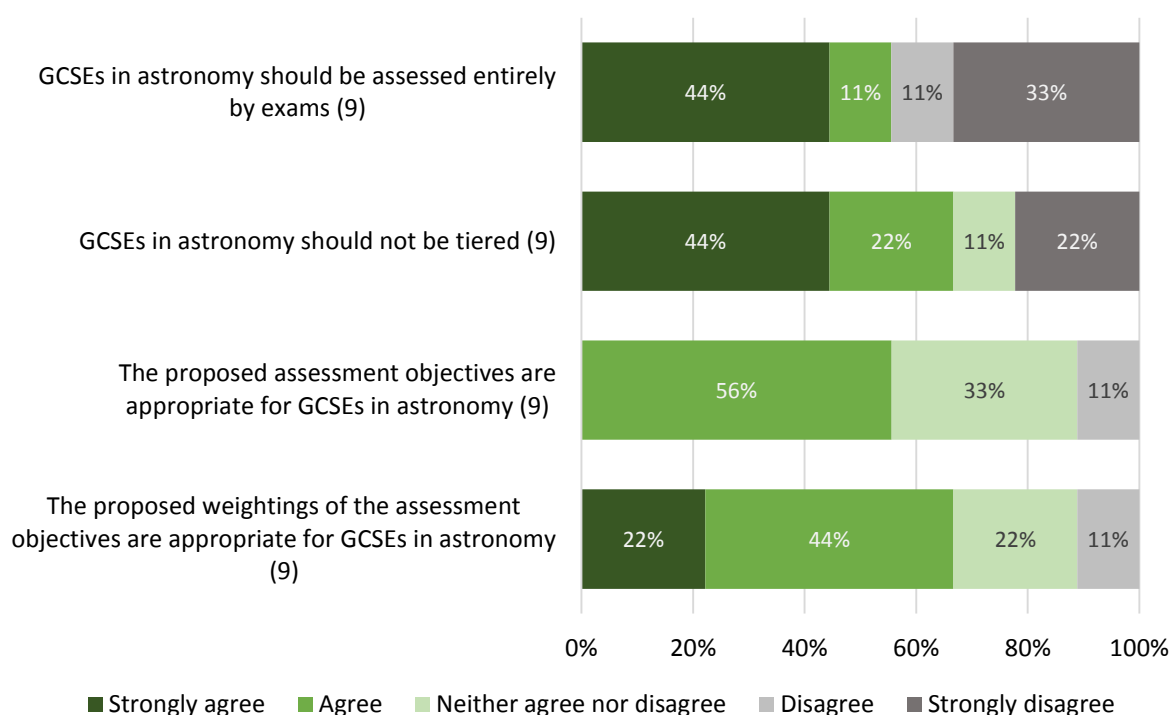
Ofqual proposes that GCSE astronomy should be assessed entirely by exams and that it should not be tiered. The proposed assessment objectives and weightings are presented in Table 9.

Table 9 GCSE astronomy – assessment objectives

Number	Assessment objectives	Weighting
AO1	Demonstrate knowledge and understanding of: <ul style="list-style-type: none"> ▪ scientific ideas ▪ scientific techniques and procedures. 	40%
AO2	Apply knowledge and understanding of: <ul style="list-style-type: none"> ▪ scientific ideas ▪ scientific techniques and procedures. 	35%
AO3	Analyse information and ideas to: <ul style="list-style-type: none"> ▪ interpret and evaluate astronomical observations, data and methods ▪ make judgements and draw conclusions ▪ develop and improve observational procedures. 	25%

A total of nine respondents answered the Likert-scale consultation questions relating to this subject. More than half (55%) agree that astronomy should be assessed entirely by exams although 44% disagree. Two thirds (66%) agree that it should not be tiered.

A similar majority (56%) agree that the proposed assessment objectives are appropriate and two thirds (66%) agree that the proposed weighting of assessment objectives is appropriate (Figure 1).

Figure 1 Summary of responses – GCSE astronomy

3.2 Assessment arrangements

Respondents agreeing with the statement that GCSE astronomy should be assessed entirely by exams provided a range of arguments:

- Exams are easier to administer than controlled assessment;
- Controlled assessment is perceived to be more time-consuming and open to plagiarism; and
- Exams would ensure consistency.

Three respondents disagreed with an entirely exam-based approach to assessment are concerned that practical skills would suffer, which they consider a vital part of astronomy. They argue that teachers would spend less time on practical skills; that practical skills risk becoming de-valued; and that pupils may be less motivated to spend time observing. One respondent expressed concern that less able pupils may struggle with exam-based assessment.

One subject association raised some concerns about *“how well practical astronomy can be assessed in a written exam when the students have undertaken a variety of observational tasks.”* They fear that this might negatively impact the validity of the assessment.

Another respondent suggests splitting the assessment into two equally weighted exams, with both exams assessing observational/practical skills as well as knowledge and understanding.

3.3 No tiering

Four respondents who agree with this proposal stated that exam papers, as well as individual questions, should suit a wide range of ability levels.

Those respondents in favour of tiered GCSEs expressed concerns about the potential impact on students of lower ability levels, specifically the effect on motivation and self-esteem if confronted with questions designed to challenge top ability students.

3.4 Assessment objectives

Two respondents noted that the assessment objectives seem of appropriate breadth and depth. Others expressed slight criticism and suggestions for improvement:

“There should be an allocation of marks directly for observing.”

Personal response - teacher

“As currently written, the assessment objectives are a little vague, though they appear to be very reasonable.”

Official response – school or college

“Although I agree in general with the objectives I would point out that the mathematical requirements are regarded as problematic by most students, both school age and mature candidates, and it may be that many potential candidates are put off entering the exam by such requirements.”

Personal response - teacher

3.5 Weightings of the assessment objectives

No further comments were made in relation to the weightings of the assessment objectives. One respondent reiterated the point (above) about the mathematical element, while another (education specialist) described the weightings as a “good balance”.

4. GCSE business

4.1 Overview

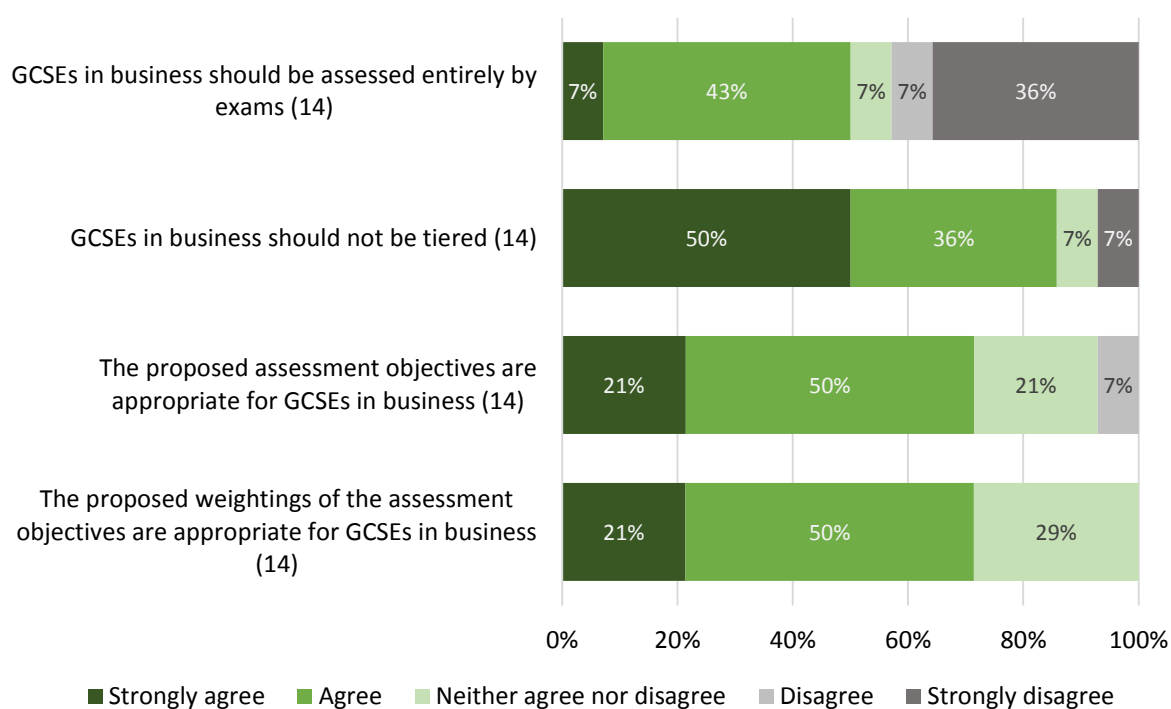
Ofqual proposes that GCSE business should be assessed entirely by exams and that it should not be tiered. The proposed assessment objectives and weightings are presented in Table 10.

Table 10 GCSE business – assessment objectives

Number	Assessment objectives	Weighting
AO1	Demonstrate knowledge and understanding of business concepts, issues and terminology.	35%
AO2	Apply knowledge and understanding of concepts and issues to business contexts and to interpret business information.	35%
AO3	Analyse and evaluate business information and issues to demonstrate understanding of the impact of these on business activity, to make reasoned judgements and justified business decisions.	30%
Specifications must ensure that at least 10% of the subject marks are allocated to the assessment of quantitative skills at a level appropriate to the qualification.		

Based on 14 respondents who answered the consultation questions about this subject, half (50%) agree that the subject should be assessed entirely by exams, while 43% disagree. The vast majority (86%) agree that it should not be tiered.

Just under three quarters (71%) believe the proposed assessment objectives – as well as their respective weightings – are appropriate (Figure 2).

Figure 2 Summary of responses – GCSE business

4.2 Assessment arrangements

Four respondents who agree with GCSE business being assessed entirely via exams (including two awarding organisations) explained that exam-based assessment:

- Is a good way to test all relevant skills;
- Is generally more objective than non-exam based assessment;
- Allows for greater comparison between schools; and
- Is easier to administer by centres.

“All the content and skills can be assessed through a written examination. Therefore, although there is an element of non-exam assessment for the current GCSE Business Studies, this is not required for the new specifications. Assessment by examination is also easier to administer for centres as they will no longer be required to manage the logistics of organising, moderating and standardising non-exam assessment.”

Awarding organisation

Respondents who disagree with exam-only assessment in this subject, advocate coursework and controlled assessment as valid modes of assessment. They argue that such approaches help to develop self-learning and practical skills – such as researching and interpreting evidence –are an important part of gaining a qualification in business and for connecting theory with practice.

“Students need to be assessed using different forms of assessment a summative assessment is not the best method for all students.”

Awarding organisation

“Coursework allows students to face reality. In the past the task sets allowed students to make a theory link with reality. This enriches their understanding and interest.”

Education specialist

“It is vital that we provide pupils with the skills to go away and research information, interpret it and draw conclusions. 100% exam will lead to 100% spoon-fed and another generation of pupils not fit for the workplace.”

Personal response - teacher

One respondent feels that exam-only assessment might lead to fewer students taking the course despite business skills being so vital in the modern world.

4.3 No tiering

Among eight respondents who agree that GCSE business should not be tiered, it was pointed out that this (non-tiering) approach offers greater accessibility for students. Specifically that less able students will be able to achieve a GCSE in business at the lower end of the grading scale whilst also stretching the most able and allowing them to fully demonstrate their knowledge, understanding and skills.

“By not having tiered assessment, the risk of failing to fully recognise a student’s full abilities is eliminated, as all students have access to the full range of marks and grades.”

Awarding organisation

Another argument put forward against tiering is that the proposed weight given to application, analysis and evaluation would allow for greater differentiation among students of different ability levels as part of the exam.

One respondent in favour of a tiered approach observed that questions would need to be carefully written so that students of lower ability would be able to fully understand what is being asked.

4.4 Assessment objectives

Five respondents who agree with the proposed assessment objectives provided supporting comments, namely that the objectives effectively describe the main abilities that should be demonstrated by students, and that they allow for reliable assessment.

One awarding organisation commented that the proposed objectives should allow for natural progression to AS and A level business and that the requirement for quantitative skills is in accordance with other reformed GCSEs.

A respondent who disagrees with the proposed assessment objectives is concerned that the word “skills” has been dropped, believing it important for students to develop entrepreneurial and business skills.

4.5 Weightings of the assessment objectives

Three respondents who agree with the weightings provided supporting comments, in which they note a fair distribution across the three assessment objectives, comparability with other GCSE qualifications, and that the weightings appear to underpin reliable assessment. One awarding organisation added that the reformed weightings will prepare students well for the shift in emphasis towards analysis and evaluation skills that feature as part of AS and A level studies

“They are more fairly weighted than the current Assessment Objectives.”

Personal response – teacher

No respondents disagree with the proposed weightings and those that neither agree nor disagree did not provide further arguments for their position.

5. AS and A level design and technology

5.1 Overview

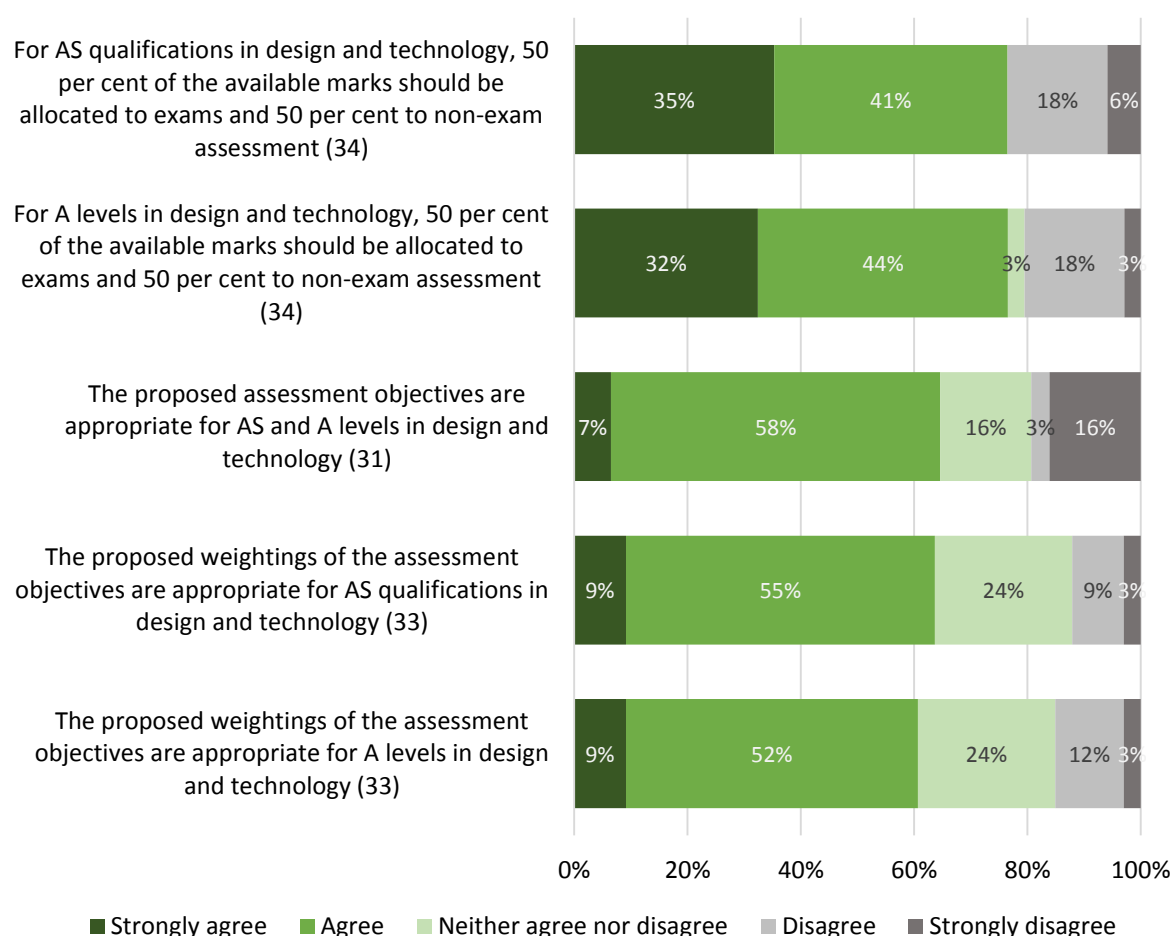
Ofqual proposes that for AS and A level qualifications in design and technology, 50 per cent of the available marks should be allocated to exams and 50% per cent to non-exam assessment. The proposed assessment objectives and weightings are presented in Table 11.

Table 11 AS and A level design and technology – assessment objectives

Number	Assessment objectives	Weighting A level	Weighting AS
AO1	Explore contexts for designing and making, investigating materials and processes to develop a commercial product.	15-20%	15-20%
AO2	Create solutions that meet user needs, employing an iterative design process and realising outcomes.	30-35%	30-35%
AO3	Analyse and evaluate design decisions and outcomes made by themselves and others.	20-35%	15-20%
AO4	Demonstrate knowledge and understanding of materials and components, technical principles, manufacturing procedures and design practice.	30-35%	30-35%

Based on 34 respondents who answered the specific consultation questions relating to this subject, just over three quarters (76%) agree that the available marks should be equally split between exam and non-exam assessment for both qualifications, while 24% disagree for AS level and 21% for A level.

Almost two thirds (65%) agree that the proposed assessment objectives are appropriate and similar proportions agree that the proposed weightings of the assessment objectives are appropriate (64% for AS level and 63% for A level) – Figure 3.

Figure 3 Summary of responses – AS and A level design and technology

5.2 Assessment arrangements

Of 26 respondents who agree with the 50/50 ratio of exam to non-exam assessment for AS design and technology, 21 provided further comments. All are of the view that 50% non-exam assessment is sufficient to assess the practical skills and abilities that are essential for this qualification, in turn providing a good balance between knowledge and application. One awarding organisation, as well as a subject association added that this offers a smooth continuation from the approach taken for the equivalent GCSE.

All eight respondents disagreeing with the ratio of exam to non-exam assessment feel that the non-exam assessment element should be increased. This is on the basis that practical skills are perceived as especially important for this subject and for developing a career in design and technology.

“The non-exam assessment should be worth a larger percentage as it requires students to demonstrate a wider range of real design skills, using personalised learning and research to respond to a brief. Similarly complex tasks cannot be set for exams as design is not about knowing things but about knowing how to find them out, synthesise this information and then apply it in creative ways.”

Personal response - teacher

One subject association expressed the view that ‘designing’ and ‘making’ should be subject to non-exam based assessment, while technical knowledge and understanding appears to lend itself well to exam assessment.

On the whole, the arguments and rationale provided in relation to AS design and technology are replicated in relation to the A level qualification.

5.3 Assessment objectives

Among the majority of respondents agreeing with the proposed assessment objectives, ten provided further comments. The main arguments are that the objectives appear much clearer and focused, as well as being sufficiently broad in coverage.

One awarding organisation raised concerns about how easily the assessment objectives could be matched to the exam and non-exam assessment components, while a subject association was of the view that the assessment objectives should be aligned with the corresponding GCSE qualification.

Another respondent raised concern that the proposed assessment objectives do not provide sufficient flexibility to accommodate the diversity range of activities carried out by students.

Specific suggestions

Three respondents (two of whom agree with the objectives in principle and one awarding organisation, which strongly disagrees) are concerned about some aspects of the wording and gave suggestions for improvement:

- The definition of “making” needs to be clarified with the suggestion for a wider definition to include the creation of virtual artefacts with no physical output (independent school or college);
- AO1: Change to “Explore contexts, needs and requirements for the design and manufacture of commercial products” (awarding organisation);

- AO2: Replace “create” with “design and make” to split the objective into separate elements (awarding organisation);
- AO2: Change to “Apply theory and skills to create and communicate solutions that that are original and fit for purpose” (awarding organisation);
- AO3: Remove “themselves and others”, as the skills and knowledge required are essentially the same for each (awarding organisation);
- AO3: Change to “Analyse and evaluate to justify and suggest modifications for their own design decisions and outcomes, and to assess solutions designed or made by others” (awarding organisation);
- AO4: Change to: “Knowledge and understanding of designing and making principles and technical principles” (awarding organisation);
- AO4: Change to “Demonstrate knowledge and understanding of designing, making and technical principles” (awarding organisation);

One awarding organisation pointed out that designing, making, testing, refining, improving and evaluating are not always iterative processes in design and technology. Instead it should be clear that students needs to demonstrate their abilities through *“iterative design processes”* that *“have considerations of designing, making, testing, refining, improving and evaluating”*.

5.4 Weightings of the assessment objectives

Of those respondents who agree with the suggested weightings of the assessment objectives, eight provided further comments. Respondents mainly feel that the weightings are appropriately balanced and that there is sufficient emphasis on the practical aspects. Two awarding organisations also welcome the “flexibility” of the proposed weightings.

“The proposed weightings of the assessment objectives appear appropriate, but how these are mapped to the externally set and marked examination will require careful consideration. Retaining a small range rather than providing absolute (fixed) weightings will provide welcome flexibility to awarding bodies.”

Awarding organisation

Three respondents who disagree with the proposed weightings would like to see more weight given to research, creating solutions, and analysis and evaluation,

respectively. Another respondent suggested widening the range for each objective to accommodate the greater variety of design projects.

A subject association provided a detailed alternative proposal for the weightings, namely 20% each for AO1, AO2 and AO3, and the remaining 40% for AO4. They feel the emphasis on AO4 *“demonstrates the subject’s well-defined epistemological base and the expectation that candidates demonstrate knowledge of this and have it assessed within the examination”*.

On the whole, the arguments and rationale provided in relation to AS design and technology were replicated in relation to the A level qualification. That said, one awarding organisation agreeing with the proposed weightings of the AS qualification did not agree with the weightings proposed for the A level, stating that they would like to see consistency in relation to AO3 and preferred the proposal given under the AS qualification.

6. GCSE economics

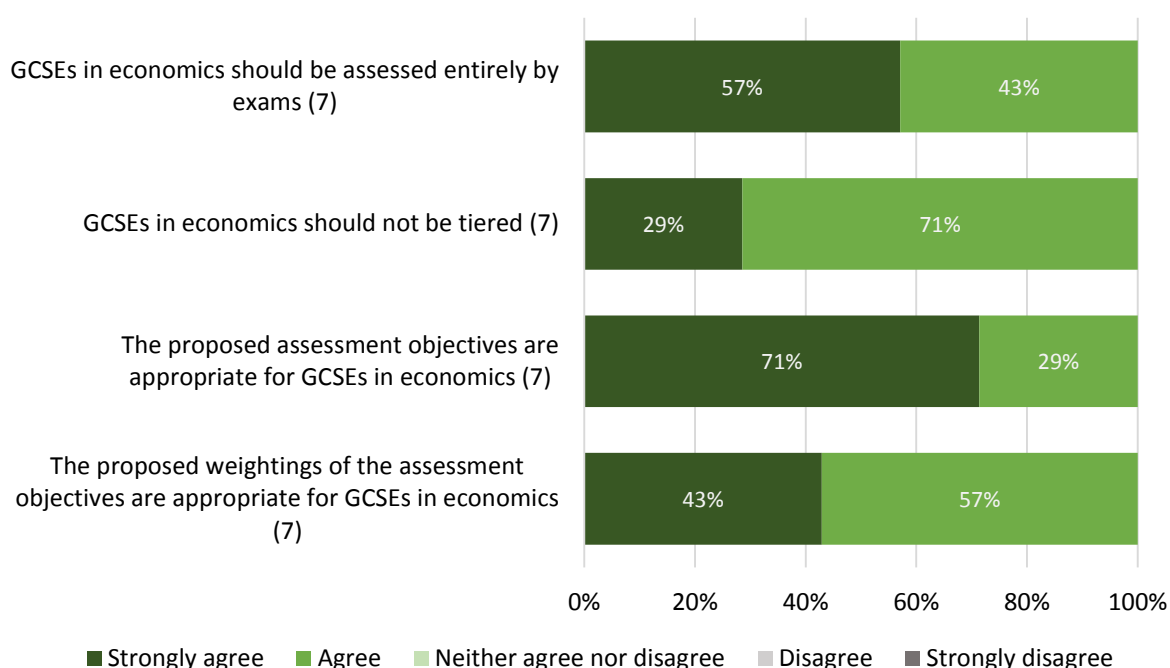
6.1 Overview

Ofqual proposes that GCSE economics should be assessed entirely by exams and that it should not be tiered. The proposed assessment objectives and weightings are presented in Table 12.

Table 12 GCSE economics – assessment objectives

Number	Assessment objectives	Weighting
AO1	Demonstrate knowledge and understanding of economic concepts, issues and terminology.	35%
AO2	Apply knowledge and understanding of economic concepts, issues and terminology to a variety of contexts.	35%
AO3	Analyse and evaluate economic evidence to demonstrate understanding of economic behaviour, make reasoned judgements and present appropriate economic conclusions.	30%
GCSE specifications in economics must ensure that at least 10% of the subject marks are allocated to the assessment of quantitative skills at a level appropriate to the qualification.		

Of the seven respondents who answered the consultation questions relating to this subject, all are in agreement that the subject should be assessed entirely by exams, that it should not be tiered, that the proposed assessment objectives are appropriate, and that the proposed weighting of assessment objectives is appropriate – Figure 4.

Figure 4 Summary of responses – GCSE economics

6.2 Assessment arrangements

Respondents who provided supporting comments simply stated that the content could be effectively assessed with exams (3 respondents) and that this would be less “problematic” compared with coursework (2 respondents).

6.3 No tiering

Four respondents provided additional comments about the proposal that GCSEs in economics should not be tiered and stated that this would give all students an equal opportunity to achieve all grades, as has worked well in the past.

6.4 Assessment objectives

Five respondents provided positive comments about the proposed assessment objectives, describing them as appropriate, clear, coherent and likely to provide students with a sound grasp of the fundamentals of economics. One awarding organisation stated that the objectives would allow for natural progression on to AS and A level economics.

6.5 Weightings of the assessment objectives

Respondents’ are of the view that the proposed weightings of the assessment objectives are appropriately balanced.

7. GCSE engineering

7.1 Overview

Ofqual proposes that for GCSE engineering, 60 per cent of the available marks should be allocated to exams and 40% per cent to non-exam assessment. The proposed assessment objectives and weightings are presented in Table 13.

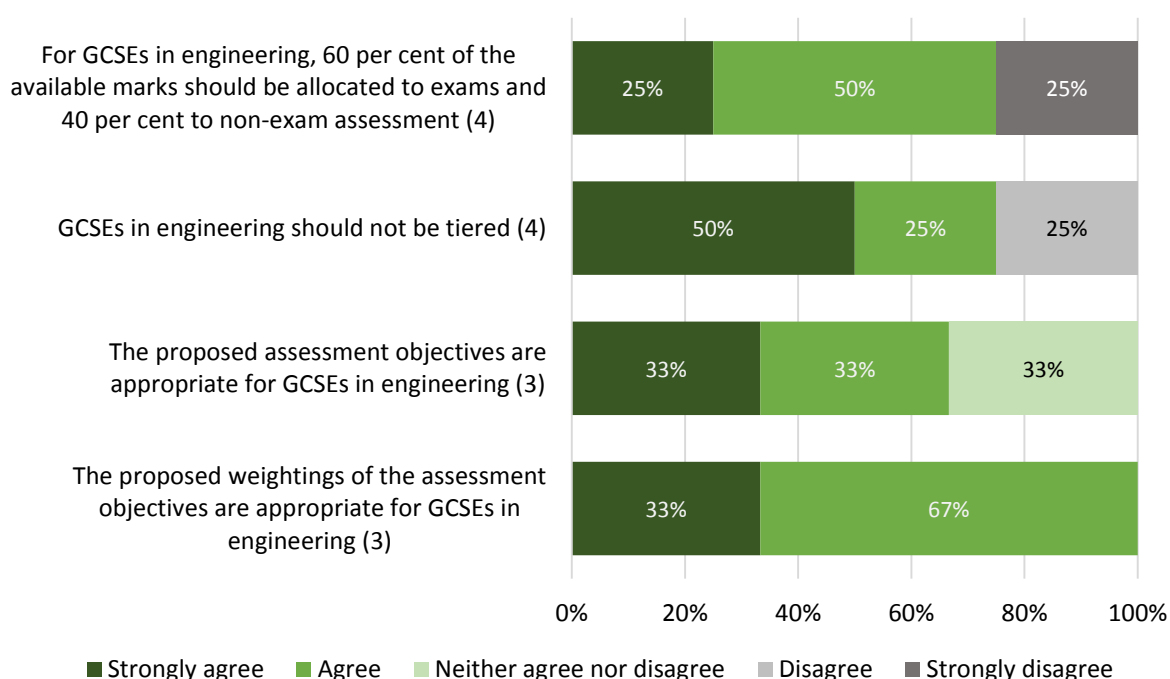
Table 13 GCSE engineering – assessment objectives

Number	Assessment objectives	Weighting
AO1	Demonstrate knowledge and understanding of engineering principles.	35%
AO2	Apply skills, knowledge and understanding in a practical context through the use of a range of tools, equipment, materials, components and manufacturing processes.	40%
AO3	Analyse and evaluate evidence arising from a range of engineering contexts.	25%

Four respondents answered the consultation questions relating to this subject, with three generally in agreement with Ofqual's proposals.

One respondent disagrees with the proposal that 60 per cent of the available marks should be allocated to exams and 40 per cent to non-exam assessment. One also disagrees that GCSEs in engineering should not be tiered – Figure 5.

Figure 5 Summary of responses – GCSE engineering



7.2 Assessment arrangements

Two respondents (including an awarding organisation) provided comments supporting Ofqual's proposed allocation for exam and non-exam based assessment.

"It is noted that the proportion of non-exam has been reduced from 60% to 40%, in recognition of the fact that the draft content places less of an emphasis upon the design element and a greater emphasis upon subject content that can most appropriately be assessed through an external examination. We believe that this balance is appropriate in terms of the content that is covered in the 'application of practical skills' section of the subject content, in conjunction with the other areas of the subject content that students will have to draw upon as part of the application of their practical skills."

Awarding organisation

One respondent (a subject association) disagrees with the proposal, calling for a greater allocation (60%) to non-exam assessment.

"The allocation of 40 per cent examination and 60 per cent non-examination is appropriate. The ratio sends out clear messages about the priority awarded to the value of manufacturing high quality products and associated practical activity which cannot be assessed in examination conditions."

Subject association

7.3 No tiering

One awarding organisation provided further comments on the proposal, stating that the subject content would lend itself well to an un-tiered approach. A subject association also agrees with this proposal, explaining that previous experience of tiered examinations in engineering at this level have not proved to be successful.

The respondent disagreeing with the proposal of un-tiered GCSEs in engineering gave no further comments.

7.4 Assessment objectives

Two awarding organisations and one subject association commented on the assessment objectives for GCSE engineering. While two agree on the whole with the proposal, one awarding organisation gave a number of objections, stating that:

“The objectives do not reflect the main principles of engineering in today’s world, as they don’t consider the social values, purpose of engineering, user need and requirements etc. There is no real consideration of exploration and there is no consideration of problem solving.”

Awarding organisation

Specific suggestions

- AO1: There should be some clarification on the term ‘engineering principles’ (awarding organisation);
- AO2: Has no purpose (awarding organisation);
- AO2: Relates too strongly to non-exam assessment (‘through the use of a range of tools, equipment, materials, components, and manufacturing processes’) and should be suitable for coverage in part through exam assessment (awarding organisation);
- AO3: There is no real reflection in the content to explain or outline what is meant by, or determines ‘the range of engineering contexts’ (awarding organisation);
- AO3: The term ‘engineering context’ could be made clearer (awarding organisation);
- AO3: The term ‘engineering context’ is ambiguous (subject association); and

- AO3: Not clear how this objective translates into assessed activity (subject association).

7.5 Weightings of the assessment objectives

One awarding organisation and one subject association share the view that the proposed weightings are appropriate, especially in that they place more emphasis than the current objectives on higher order skills such as analysis and evaluation.

8. AS and A level environmental science

8.1 Overview

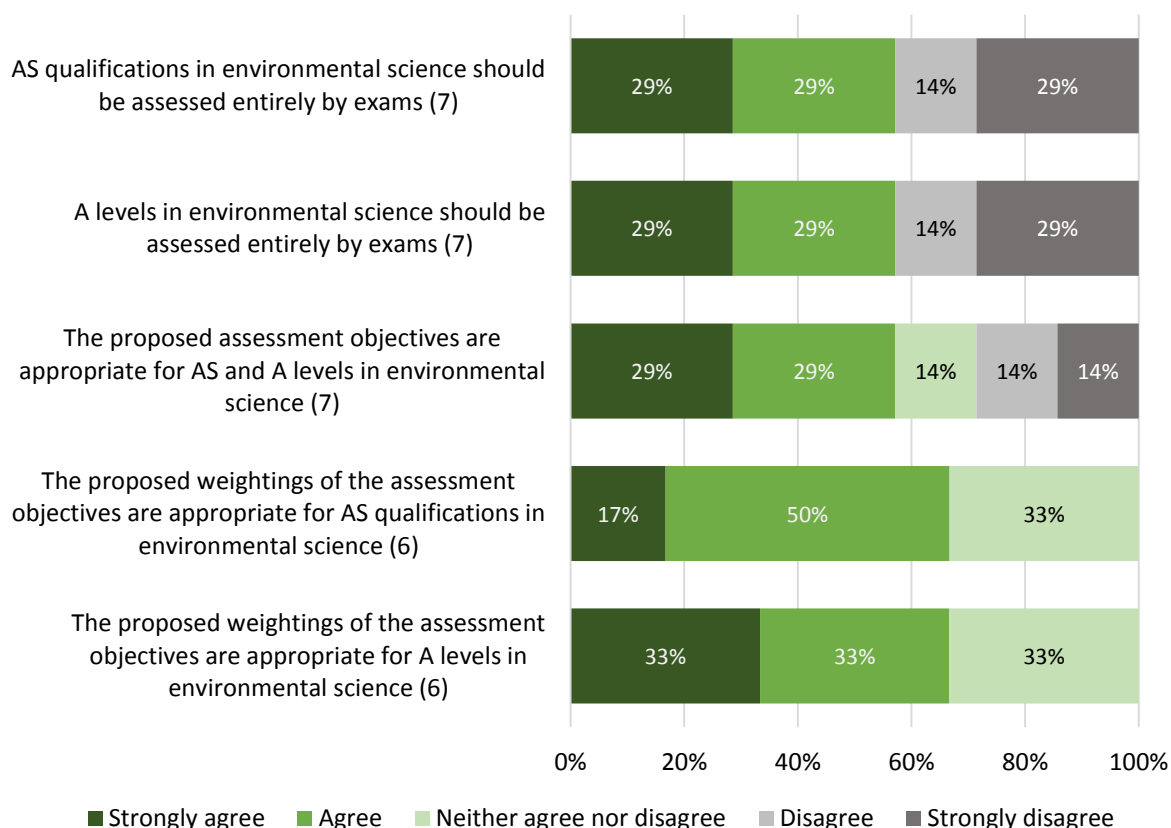
Ofqual proposes that AS and A level qualifications in environmental science should be assessed entirely by exams. The proposed assessment objectives and weightings are presented in Table 14.

Table 14 AS and A level environmental science – assessment objectives

Number	Assessment objectives	Weighting A level	Weighting AS
AO1	Demonstrate knowledge and understanding of scientific ideas, natural processes and systems, techniques, and issues.	30-35%	35-40%
AO2	Apply knowledge and understanding of scientific ideas, natural processes and systems, techniques, and issues.	40-45%	40-45%
AO3	Analyse, interpret and evaluate scientific information, ideas and evidence including issues raised by scientific research procedures.	25-30%	20-25%
The ability to use mathematical skills at a level appropriate for GCE Qualifications in Environmental Science must be tested across the assessment objectives. The weighting of mathematical skills within this subject must be at least 10% for both AS and A level qualifications.			

Seven respondents answered the consultation questions relating to this subject. More than half (58%) agree that these qualifications should be assessed entirely by exams and that the proposed assessment objectives are appropriate, whereas 43% disagree.

Two thirds (67%) agree that the proposed weightings of the assessment objectives are appropriate for AS qualifications, which is similar to A levels (66%) (Figure 6).

Figure 6 Summary of responses – AS and A level environmental science

8.2 Assessment arrangements

Three respondents who agree with AS and A level environmental science being assessed entirely by exams are of the view that all content and skills could be successfully assessed in this way, that it forms the most effective method for this subject, and that it reflects how the subject has been assessed successfully in the past.

Two of three respondents disagreeing with the proposal argue that this arrangement in fact deviates from other science subjects. Another respondent commented that the inclusion of investigative work and fieldwork would offer better learning opportunities for students.

“We are concerned to see that the practical element of the Environmental Science qualification will not be directly assessed. Biology, chemistry and physics A levels have direct assessment of students’ skills through the practical endorsement, alongside the indirect assessment of practical understanding and skills through exam questions. The lack of direct assessment implies that the Environmental Science qualification does not put the same value on practical work as other science subjects.”

Learned society

“The lack of direct assessment through the practical endorsement in Environmental Science signals unfortunate messages that practical work is not valued to the same extent as in the other science subjects, and this is, in turn, may well result in a poorer experience for students.”

Subject association

“The component for assessment of practical skills (including fieldwork) should be at least the 15% weighting stipulated for other sciences. A practical endorsement for students should also be added, to ensure comparability across the sciences”.

Education charity

On the whole, the arguments and rationale provided in relation to AS environmental science were replicated in relation to the A level qualification.

8.3 Assessment objectives

Two respondents who agree with the assessment objectives for AS and A level environmental science stated that they appear appropriate, with one subject association especially positive about the reduced emphasis on AO1 in favour of more applied elements.

Two respondents disagreeing with the objectives pointed out an apparent lack of consistency with other science subjects:

“Any assessment objective that omits studying the environment outside the classroom or science laboratory is lacking. This is compounded by the fact that AO3 leaves out the practical and fieldwork skill (unlike the AO3s in both Geography and Biology). As a result, Environmental Science could appear as an easy and less robust qualification.”

Education charity

Other specific comments:

- With respect to AO3, one subject association would like to see more focus on making judgements, reaching conclusions, as well as developing and refining practical procedures; and
- With respect to AO2, the same respondent feels there should be reference to different contexts through which theoretical knowledge can be applied in support of practical work.

8.4 Weightings of the assessment objectives

Respondents expressing satisfaction with the proposed weightings for AS and A level environmental science explain they believe them to be comparable with other science subjects.

9. GCSE geology

9.1 Overview

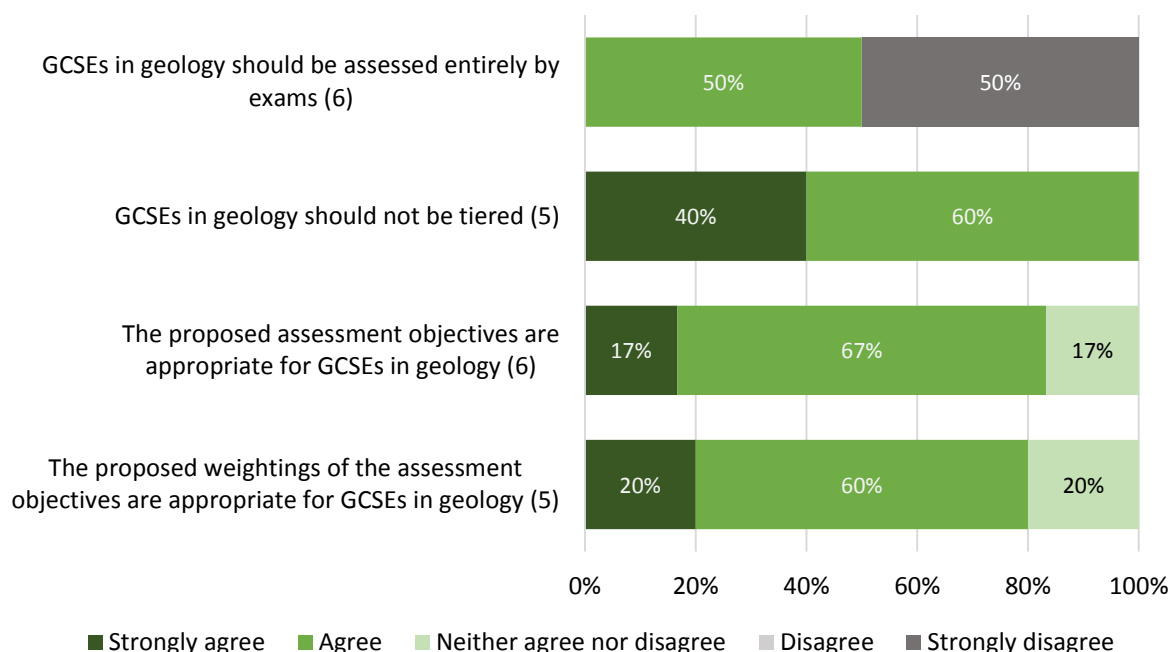
Ofqual proposes that GCSE geology should be assessed entirely by exams and that it should not be tiered. The proposed assessment objectives and weightings are presented in Table 15.

Table 15 GCSE geology – assessment objectives

Number	Assessment objectives	Weighting
AO1	Demonstrate knowledge and understanding of key geological ideas, processes, techniques and procedures.	40%
AO2	Apply knowledge and understanding of key ideas, processes, techniques and procedures in geology.	40%
AO3	Analyse, interpret and evaluate geological ideas, information and evidence to make judgements and draw conclusions.	20%

Views are divided with respect to Ofqual's proposal to assess this subject entirely by exams. Based on the views of six respondents, 50% agree, whereas 50% strongly disagree.

All respondents agree that GCSE geology should not be tiered and the majority (at least 80%) agree that the proposed assessment objectives, as well as the weightings of those assessment objectives, are appropriate – Figure 7.

Figure 7 Summary of responses – GCSE geology

9.2 Assessment arrangements

All respondents, irrespective of whether or not they agree that GCSEs in geology should be assessed entirely by exams, stressed the importance of fieldwork. Some of those agreeing in principle with Ofqual’s proposal feel that while non-exam assessment would be preferable, they recognise the issues and challenges associated with this form of assessment.

“Beyond completing the fieldwork, further benefit could be gained through field-based or, perhaps more practically, subsequent class-based assessments. We recognise that this places additional demands on teaching resources, but a careful balance could be struck to emphasise the importance of geological fieldwork and follow up study, analysis and inference.”

Subject association

Respondents disagreeing with Ofqual’s proposal are of the view that a non-exam component is essential to assess the practical skills seen as a vital part of this qualification.

“Geology is a practical subject and so the practical skills are vital, the assessment of these skills in the exams is no different to the ways that were done before anyway and ignores the vital practical work which is the basis of any career as a field Geologist.”

Personal response – educational specialist

9.3 No tiering

One awarding organisation supportive of Ofqual's proposal that GCSE geology should not be tiered, commented that this aligns with arrangements for the current qualification which has succeeded in serving the full ability range of students to-date.

9.4 Assessment objectives

Four respondents providing comments in relation to the proposed assessment objectives welcome: the inclusion of fieldwork, the similarities to other science GCSEs, and the consistency with existing qualifications.

"There is scope in the assessment objectives to cover issues relating to the application of geology in everyday life: i.e. minerals as an essential natural resource."

Subject association

9.5 Weightings of the assessment objectives

Two subject associations provided opposing views specifically in relation to 15% of the exam mark being allocated to the assessment of practical or field skills:

"The written examination weightings for practical techniques and mathematical skills are specified as 15% and 10% respectively. This lack of consistency with the weightings for Astronomy and other science GCSEs is not welcome and will not ensure that geology is taught as a scientific subject."

Subject association

"We note that 15% of the exam marks will be used for the assessment of practical or field skills, drawing on the fieldwork undertaken during the course. We support this weighting as well as the proposed weighting between demonstrating knowledge and understanding, its application and the evaluation of geological information to make judgements. These are broadly consistent with those currently in use and we are supportive of these weightings."

Subject association

10. AS and A level history of art

10.1 Overview

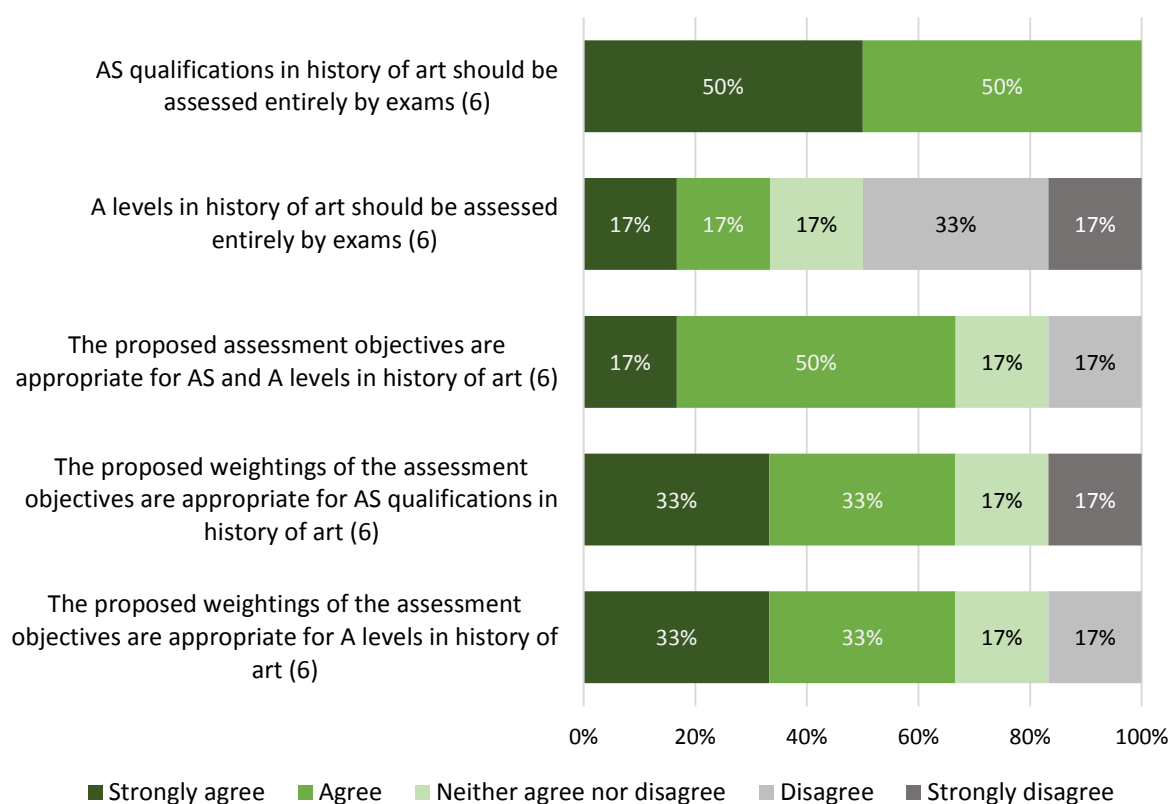
Ofqual proposes that AS and A level qualifications in history of art should be assessed entirely by exams. The proposed assessment objectives and weightings are presented in Table 16.

Table 16 AS and A level history of art – assessment objectives

Number	Assessment objectives	Weighting A level	Weighting AS
AO1	Demonstrate knowledge and understanding of the contexts of art.	30-40%	30-40%
AO2	Analyse and interpret artists' work demonstrating understanding of visual language.	30-40%	30-40%
AO3	Make substantiated critical judgements about art by producing coherent and reasoned argument.	30-40%	20-30%

Six respondents answered consultation questions relating to AS and A level history of art. While all either strongly/generally agree that AS qualifications should be assessed entirely by exams, only 34% agree that this approach should be taken for A levels (50% disagree).

Two thirds (67%) agree that the proposed assessment objectives are appropriate for both qualifications and the same proportion also agree that the weightings of those assessment objectives are appropriate – Figure 8.

Figure 8 Summary of responses – AS and A level history of art

10.2 Assessment arrangements

With respect to the AS qualification, one awarding organisation affirm that the assessment objectives could be reliably assessed using an exam-based approach. A subject association explained that most of their members agree with the proposal, although some would like to see some allowance for coursework or assessed projects. With respect to the A level, this same subject association added that the inclusion of coursework would give history of art parity with English and history A levels.

Two respondents point out the importance of coursework in this subject to sufficiently prepare for study this subject at University. Two respondents also feel that the inclusion of coursework would be helpful to enable dyslexic students to achieve their full potential.

10.3 Assessment objectives

Two respondents provided further comments on the proposed assessment objectives¹¹, describing them as thorough, appropriate and reflecting the abilities that should be demonstrated by students studying this subject. The awarding organisation also noted that the proposed objectives are comparable to other reformed AS/A levels.

10.4 Weightings of the assessment objectives

One awarding organisation agreeing with the weightings for this subject stated that they are entirely appropriate and allow for demand across the AS and A level to be differentiated.

The respondent disagreeing with the weightings (an independent school or college) feels that there is too much emphasis on objective AO3 relating to critical judgements.

On the whole, the arguments and rationale provided in relation to AS design and technology were replicated in relation to the A level qualification.

¹¹ NB: One subject association (not included in the two mentioned above) appears to have mistaken the current assessment objectives listed in section 3.54 of the consultation document for the proposed ones.

11. AS and A level music technology

11.1 Overview

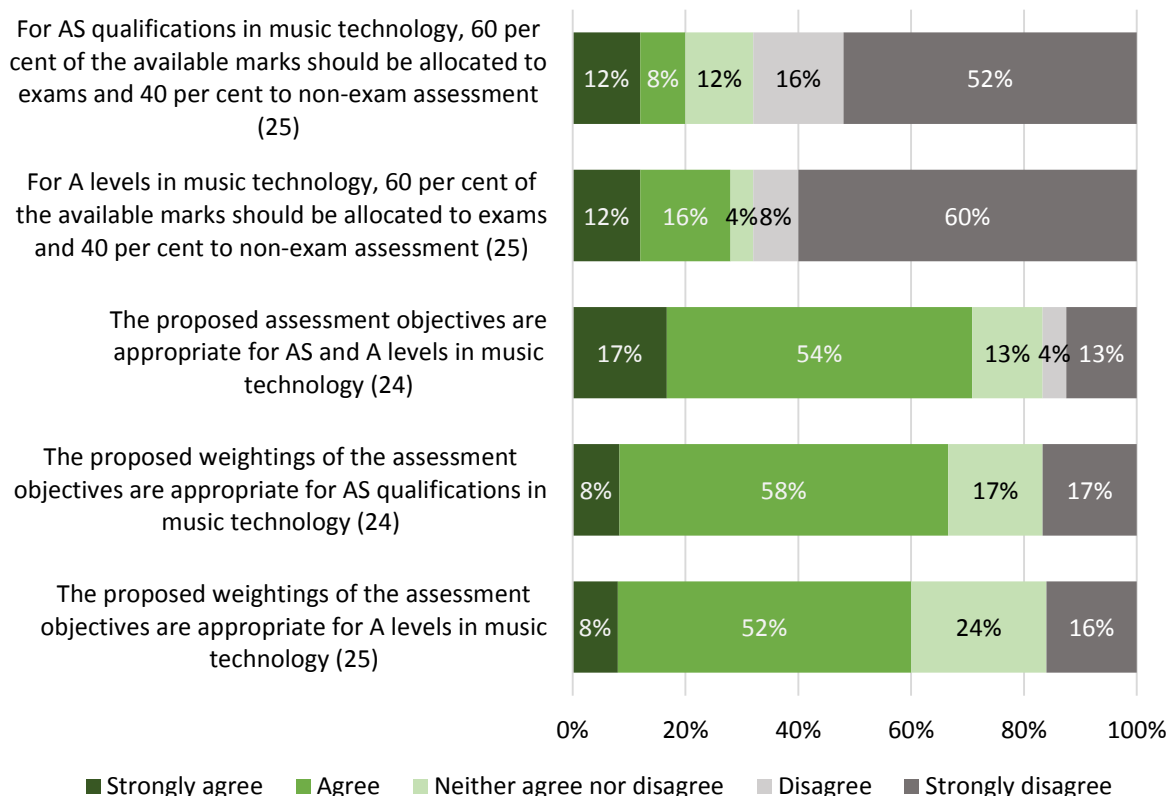
Ofqual proposes that for AS and A level music technology, 60 per cent of the available marks should be allocated to exams and 40% per cent to non-exam assessment. The proposed assessment objectives and weightings are presented in Table 17.

Table 17 AS and A level music technology – assessment objectives

Number	Assessment objectives	Weighting A level	Weighting AS
AO1	Demonstrate use of music technology to capture, edit, process and produce recordings.	30-40%	30-40%
AO2	Create, manipulate and structure sounds with technical control using production techniques.	20-30%	20-30%
AO3	Demonstrate and apply knowledge and understanding of music technology.	20-30%	25-35%
AO4	Use analytical and appraising skills to make evaluative and critical judgements about the technical processes and principles that underpin the use of technology in music.	10-20%	10-20%

A total of 25 respondents answered the consultation questions relating to this subject. The majority (68%) disagree that 60 per cent of the marks should be allocated to exams and 40 per cent to non-exam assessment with respect to both qualifications. The majority view appears to favour a greater emphasis than proposed on non-exam based assessment.

Respondents are generally favourable towards the proposed assessment objectives, with 71% agreeing that they appropriate. Two thirds (66%) agree that the proposed weightings of the assessment objectives are appropriate at AS level while 60% agree that the weightings are appropriate at A level – Figure 9.

Figure 9 Summary of responses – AS and A level music technology

11.2 Assessment arrangements

Four respondents agreeing with the proposed balance of non-exam to exam based assessment commented that this would enable more objective assessment and provide a level playing field for students taking this subject.

Most respondents (21), including all subject associations responding in relation to this subject, disagree with the proposal. They argue that music technology needs to reflect the world of work and that the non-exam assessment component should be worth a higher percentage. While eleven respondents acknowledged that theoretical knowledge is necessary, most stressed that trial and practice is vital.

“Music technology is a practical subject requiring work over time; an over-emphasis on written knowledge, as opposed to demonstrable knowledge of music technology practices, is likely to render the qualification less helpful to students going on to employment, further and higher education.”

Subject association

“This subject on the whole requires practical skills, not theoretical ones, therefore written responses to a creative art are not appropriate. I believe that the best way to assess this is through coursework rather than under clinical exam conditions.”

Personal response - teacher

“Theoretical knowledge can be assessed both by written examination and by the way that knowledge informs and enhances the quality of practical submissions (when assessed by a subject specialist)... The proposed weighting would, if implemented, constitute a significant retrograde step in preparing learners of this subject for progression from school to University.”

Personal response – retired teacher

While three respondents suggested a 50/50 ratio between exam and non-exam based assessment, nine others, including three subject associations favour a ratio of at least 60/40 in favour of non-exam assessment. Eight respondents did not comment on the exact ratio they thought would be appropriate but simply argued for a greater weighting towards non-exam based assessment.

While most respondents provided similar views for AS and A level qualifications, two respondents are of the view that underpinning theory is more important for A level and therefore agree with the proposed proportions of non-exam to exam assessment.

Eight respondents stressed the importance of better, more objective and accurate ways of assessing coursework. Three propose a marking system that takes into account the whole process of making a recording rather than just marking the final product, the reason being that this would offer parity with other Art qualifications.

11.3 Assessment objectives

Seven respondents commented that the assessment objectives appear to cover all the core skills and abilities that students should demonstrate, as well as providing a platform for variety and creativity.

“I’m pleased that AOS 2 and 3 are separate because ‘creating’ is drastically different to ‘demonstrating.’”

School or college

Two respondents who disagree stated that the assessment objectives should focus on the process and practical skill of the student and not just the final product.

“Yes, theoretical knowledge is very important and helpful, but unless it is based on practical experience its relevance is diminished.”

Personal response - teacher

Other specific suggestions are that candidates should be asked to state the models they have followed in developing their composition work; limit the range of styles in arranging and composing; and define more clearly the creative models to be followed.

11.4 Weightings of the assessment objectives

A total of 12 respondents feel that the weighting between assessment objectives is appropriate, providing a broad range of knowledge, as well as reflecting the core skills students need to demonstrate

Three respondents welcome the balance between theoretical and applied knowledge and creative work, but are concerned how that can be realised if non-exam based assessment is reduced to 40% of the overall mark.

Two respondents state that they welcome the higher weighting for AO1 (recording), although one respondent favours equal weightings for AO1 and AO2. Another respondent mentioned that they agree with the higher weighting given to AO3 in the AS compared with the A level qualification.

All respondents disagreeing with the weightings reiterated their concerns about the balance of exam to non-exam assessment rather than the weighting of the assessment objectives.

On the whole, the arguments and rationale provided in relation to AS design and technology were replicated in relation to the A level qualification.

12. AS and A level philosophy

12.1 Overview

Ofqual proposes that AS and A level qualifications in philosophy should be assessed entirely by exams. The proposed assessment objectives and weightings are presented in Table 18.

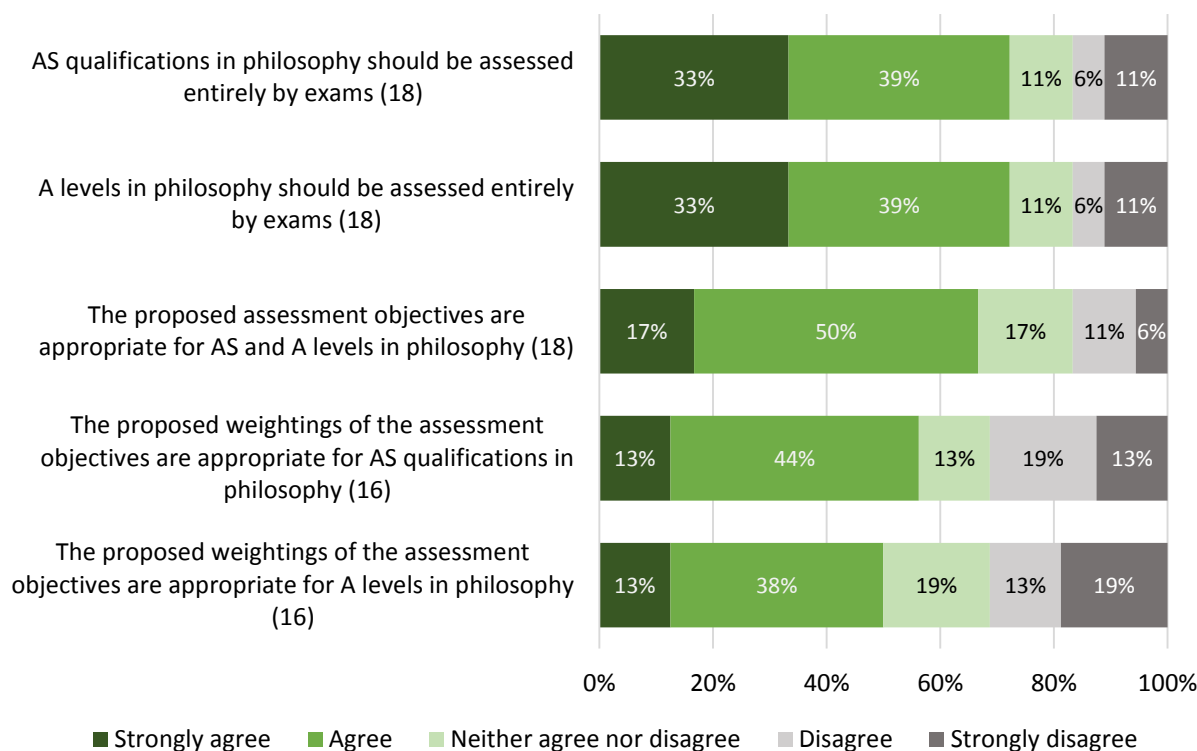
Table 18 AS and A level philosophy – assessment objectives

Number	Assessment objectives	Weighting A level	Weighting AS
AO1	Demonstrate knowledge and understanding of the core concepts and methods of philosophy.	25-30%	30-35%
AO2	Apply conceptual analysis and argument analysis to reasoning.	40-45%	40-45%
AO3	Evaluate philosophical arguments to generate reasoned responses to philosophical questions.	25-30%	20-25%

Based on 18 respondents answering consultation questions relating to this subject, for both qualifications almost three quarters (72%) agree that these should be assessed entirely by exams, with 17% disagreeing.

Two thirds (67%) agree that the proposed assessment objectives are appropriate for both qualifications, with 17% disagreeing.

A slightly narrower majority agree that the proposed weightings of the assessment objectives are appropriate for AS levels (54%) and A levels (51%). Just under two thirds (32%) disagree with the proposed weightings of the assessment objectives for both qualifications – Figure 10.

Figure 10 Summary of responses – AS and A level philosophy

12.2 Assessment arrangements

Of those respondents who agree with the proposal for exam-only assessment, eleven provided further comments. Most of those (6), including one awarding organisation, agree that exams provide a more consistent, fair, valid and appropriate way of assessing this subject. Three respondents commented that coursework is “open to abuse” and is “not secure”. Two respondents also stated that the content lends itself well to examination and that philosophy is about being able to respond in effective written form to a question.

The respondent who neither agrees nor disagrees with the proposal stated that at least a small percentage of coursework should be included, as students should be given the opportunity to research their answers.

Respondents disagreeing with the proposal for exam-based assessment believe that philosophy requires careful thought and this is not compatible within the timescale of exams; that students should give their own opinions through extended essays; and that students could be effectively assessed based on their ability to hold philosophical discussions.

The arguments and rationale provided in relation to AS philosophy were replicated in relation to the A level qualification.

12.3 Assessment objectives

Respondents agreeing with the proposed assessment objectives provided a variety of arguments. Five stated that they appear well formulated, relevant, and appropriate for the subject. One also mentioned that the existing objectives undervalue conceptual analysis and argumentation.

Among those disagreeing with the proposed objectives, a subject association and training provider both feel that AO2 cannot be easily separated from the first and third, as *“one of the core methods of philosophy is analysis, and analysis is used as a preliminary stage in evaluation”* (subject association). Both of these respondents strongly recommended that the existing two assessment objectives are retained.

“Teachers and examiners will become confused about the precise distinction of the second assessment objective from the first and third.”

Private training provider

“The current assessment objectives are supported by strong empirical evidence that they appropriately reflect the subject and drive valid and reliable assessments, which demonstrably meet the Ofqual regulatory criteria.”

Awarding organisation

12.4 Weightings of the assessment objectives

Three respondents who agree with the proposed weightings feel they are appropriate and well balanced. Among those disagreeing, two mentioned that AO3 (evaluation) should be weighted more strongly. Two respondents (including a subject association) disagree with the weightings due to their disagreement with the assessment objectives. The same subject association also feels that AO2 of the current objectives should be retained and weighted at ‘25% to 30%’, rather than the current 20%.

One awarding organisation neither agrees nor disagrees with the proposed weightings, stating that *“until we are able to establish how the AOs will operate in assessments... we are unable to agree that the weightings are appropriate.”*

The arguments and rationale provided in relation to the AS qualification were replicated in relation to the A level qualification. One subject association specifically mentioned with respect to A level philosophy that they favour the current weighting of 40% attached to AO2.

13. GCSE psychology

13.1 Overview

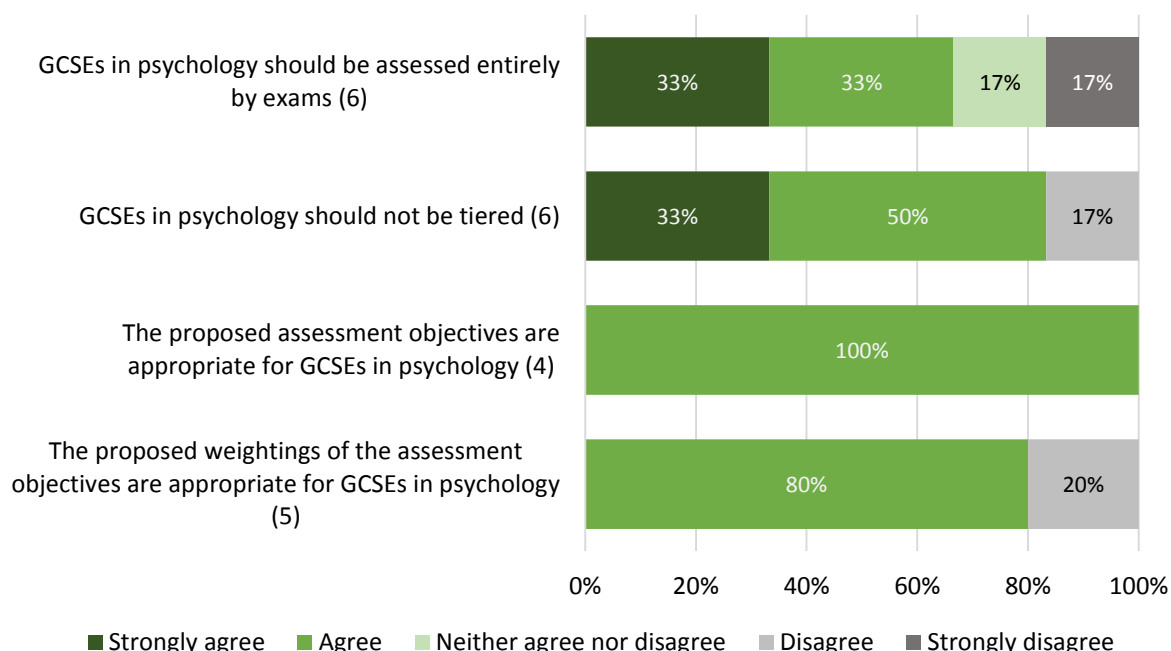
Ofqual proposes that GCSE psychology should be assessed entirely by exams and that it should not be tiered. The proposed assessment objectives and weightings are presented in Table 19.

Table 19 GCSE psychology – assessment objectives

Number	Assessment objectives	Weighting
AO1	Demonstrate knowledge and understanding of psychological ideas, processes, techniques and procedures.	35%
AO2	Apply knowledge and understanding of psychological ideas, processes, techniques and procedures including when handling data.	35%
AO3	Analyse and evaluate psychological information, evidence, ideas, processes, techniques and procedures to make judgements and reach conclusions.	30%
Minimum of 20% of the overall qualification is allocated to research methods, of which a 10% minimum of the overall qualification is allocated to mathematical skills.		

Based on six respondents answering the consultation questions on this subject, two thirds (66%) agree that the qualification should be assessed entirely by exams and 83% agree that it should not be tiered.

All respondents agree that the proposed assessment objectives are appropriate and 80% agree that the proposed weightings of the assessment objectives are appropriate – Figure 11.

Figure 11 Summary of responses – GCSE psychology

13.2 Assessment arrangements

Those respondents who agree with the proposal of exam-only assessment for GCSE psychology observed that research methods and practical investigations will have to be assessed indirectly. One respondent noted that the logistics of coursework would be cumbersome and therefore favours exam-only assessment.

A subject association, neither agreeing nor disagreeing with the proposal, noted that they are *“disappointed that practical work is not assessed, however, we recognise that this is in line with current policy and as such, agree that the content can be appropriately assessed entirely by exams.”* A preference was given for the inclusion of a non-exam assessment component to assess pupils on laboratory and experimental work.

13.3 No tiering

One respondent (teacher) disagrees with the proposal for not tiering GCSE psychology, however they also noted in their comments that *“tiering never really worked in this subject years ago”* and therefore *“better to have one exam for all”*.

Two awarding organisations commented that the content and question papers can allow for appropriate differentiation between all students, without the need for tiering.

13.4 Assessment objectives

Three awarding organisations provided comments on the proposed assessment objectives. While two believe the proposed objectives are appropriate and will allow for natural progression on to AS/A level psychology, the other feels that they should be aligned more closely to other science GCSEs to better enable onward progression.

Specific comments and suggestions from awarding organisations:

- Suggested wording of AO1: Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures;
- Suggested wording of AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures;
- Suggested wording of AO3: Analyse information and ideas to: interpret and evaluate make judgements and draw conclusions develop and refine procedures in psychological research;
- Not all areas of subject content will fall under the umbrella of psychological ideas such as 'biological concepts' and therefore the term 'scientific' rather than 'psychological', as used in A level, would be appropriate in AO1 and AO2;
- 'Handling data' is not needed in the wording of AO2. Part of the maths skills component includes a section titled 'handling data', therefore this could lead to misunderstanding that AO2 is solely assessing those maths skills; and
- In line with other subjects AO2 should be about the application of knowledge and understanding.

13.5 Weightings of the assessment objectives

Three awarding organisations provided further comments on the proposed weightings of assessment objectives for GCSE psychology. One pointed out that the increased weighting for AO1 reflects the increased amount of content. Another

affirmed that all weightings, as well as the allocations given to research methods and mathematical skills, seem appropriate.

One awarding organisation, which disagrees with the suggested weightings, has proposed alternative weightings of 40% for AO1, 35% for AO2 and 25% for AO3. They support the higher weighting for AO1 with the argument that *“at GCSE level, students will predominantly be building and developing their knowledge and understanding across a breadth of topic areas.”* They justify a reduction in the weighting for AO3 on the basis that there would be an inherent risk in having a higher proportion of this more challenging assessment objective at GCSE compared to the AS/A level qualification.

“It would be preferable if the requirement that the 10% of maths content to be assessed was not embedded within the 20% research method requirement, and instead the two were separated... to ensure that: a) 10% of the qualification is assessed through research methods; and b) 10% of the qualification is assessed through mathematical skills. Opportunities to only assess mathematical skills within research methods are too restrictive a requirement and could lead to predictability.”

Awarding organisation

14. GCSE sociology

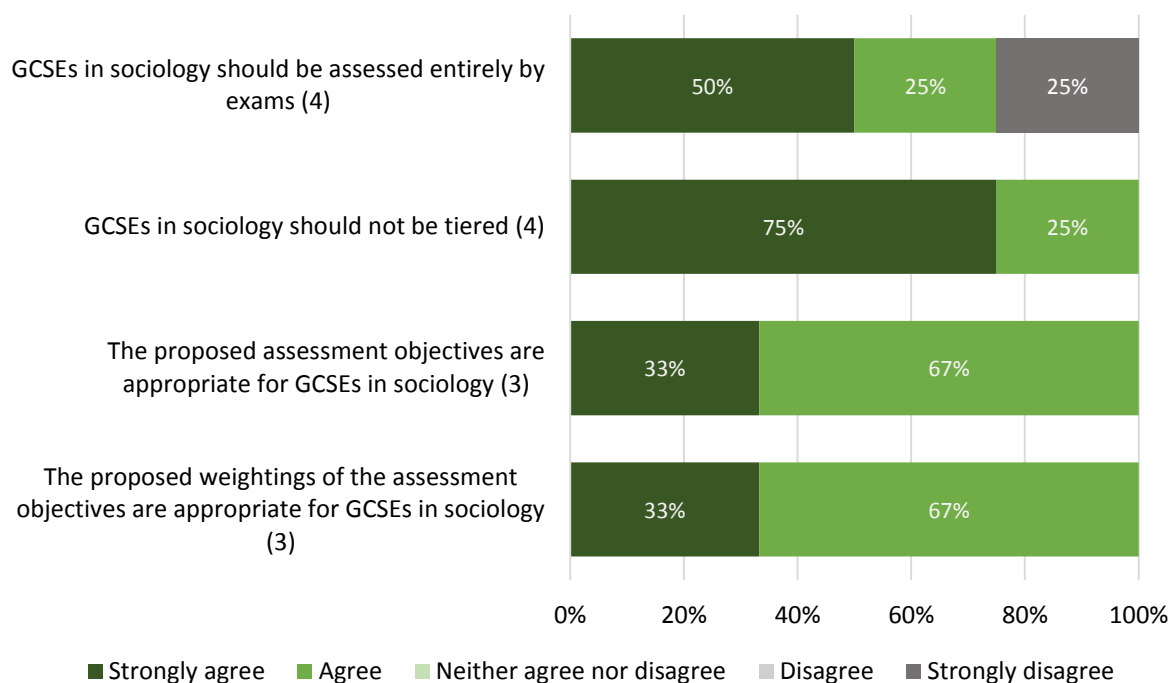
14.1 Overview

Ofqual proposes that GCSE sociology should be assessed entirely by exams and that it should not be tiered. The proposed assessment objectives and weightings are presented in Table 20.

Table 20 GCSE sociology – assessment objectives

Number	Assessment objectives	Weighting
AO1	Demonstrate knowledge and understanding of sociological theories, concepts, evidence and methods.	50%
AO2	Apply knowledge and understanding of sociological theories, concepts, evidence and methods to a range of issues.	30%
AO3	Analyse and evaluate sociological theories, concepts, evidence and methods in order to construct arguments and draw conclusions.	20%

Four respondents answered consultation questions relating to this subject. With the exception of one respondent who disagrees that assessment should be wholly examination-based, there is general agreement that sociology should not be tiered, that the proposed assessment objectives are appropriate, and that the proposed weightings of the assessment objectives are appropriate – Figure 12.

Figure 12 Summary of responses – GCSE sociology

14.2 Assessment arrangements

All three awarding organisations who commented on this subject agree with the proposal of exam-only assessment, with two going on to state that this approach will ensure fair, valid and comprehensive assessment. The respondent who disagrees with the proposal (a student) feels that there should be a coursework element.

14.3 No tiering

Two awarding organisations provided comments, stating that the full range of student abilities can be assessed via non-tiered exams; that the new 1 to 9 grading system would allow for greater differentiation between students; and that the current specification is not tiered and works well.

14.4 Assessment objectives

The three awarding organisations commented that the proposed assessment objectives seem appropriate, would allowed for valid and reliable assessment of content, and are aligned with the A level assessment objectives.

14.5 Weightings of the assessment objectives

Two awarding organisations underlined their views by providing further comments. One observed that the proposed weightings should support reliable assessment. The other offered more detailed views:

“The weightings of the proposed AOs will ensure that the broader, deeper and more complex content is assessed at a realistic level for 16 year olds. The AOs will also facilitate a suitable range of question types that will assess the necessary skills, knowledge and understanding for a GCSE in Sociology.”

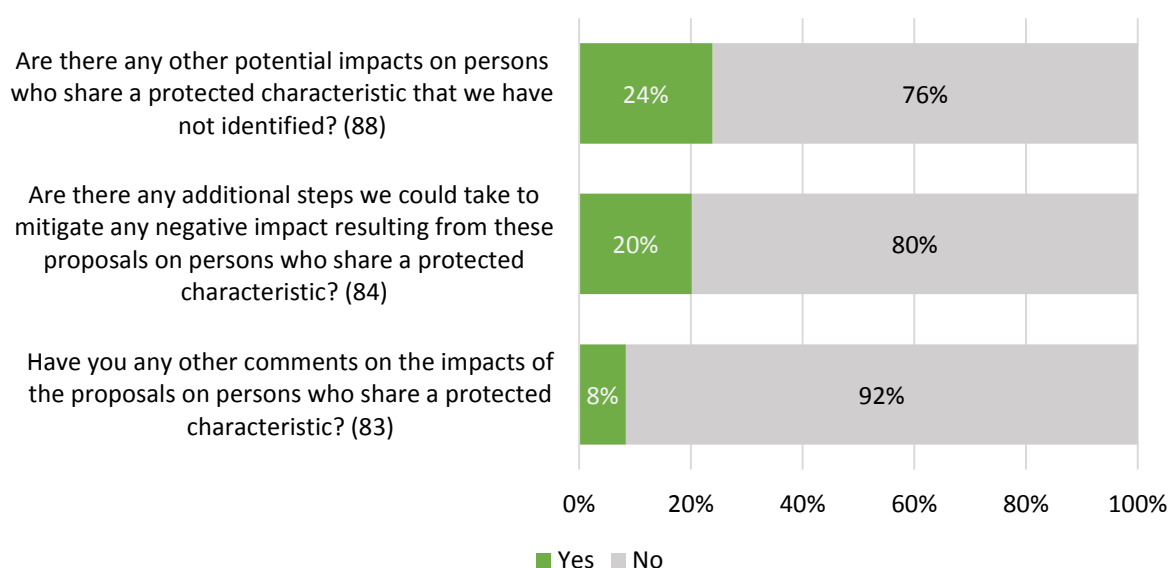
Awarding organisation

15. Equality impact

Just under a quarter of respondents (24%) who answered the consultation questions relating to equality impact, state that there could be additional potential impact on persons who share a protected characteristic beyond that which Ofqual had already identified¹².

A fifth (20%) confirm that there are additional steps Ofqual could take to mitigate any negative impact and 8% provided additional comments relating to this area – Figure 13.

Figure 13 Summary of responses – equality impact



Five respondents provided comments on the potential equality impact of assessment arrangements, principally focusing on the needs of students with a mental health disability.

One respondent who commented on AS and A level music technology, notes that final exams and assessments on one day are not always a fair reflection of the ability of students with a mental health disability. Another respondent stated that many individuals who suffer from anxiety-related disorders would benefit from the opportunity to produce coursework essays.

¹² Protected characteristics include: Age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion and belief; sex; and sexual orientation.

“Dyslexic students cannot avail themselves of supporting software unless special arrangements are made. Sufferers of ADHD and a variety of other mental health disorders, including depression, find extended periods of concentration demanding, and do better in 'short bursts' over a longer period of time (as coursework allows).”

Official response – private training provider

A respondent providing comments on AS and A level design and technology suggests that there should be sufficient support and choice so that projects can be chosen that will enable disabled students to reach their highest potential and that they can work to their strengths.

Two other respondents provided comments on the impact of the changes in content on students with protected characteristics and those will be analysed as part of the DfE consultation.

Appendix 1. Additional profiling questions

Table 21 Nation

England	115	95%
Wales	1	1%
Northern Ireland	1	1%
Scotland	1	1%
Other EU country	2	2%
Non-EU country	1	1%

Base: 121 respondents

EU/Non-EU countries listed by respondents comprise the Channel Islands, Netherlands and Jordan. It should be noted that some respondents indicated that they represented the United Kingdom or more than one UK home nation.

Table 22 How respondents heard about the consultation

Ofqual's newsletter or other communications	4	4%
Social media site	26	27%
Via internet search	3	2%
Our website	17	18%
From another organisation	21	22%
Other	26	27%

Base: 97 respondents

Appendix 2. Overview of phase 3 consultations

Live dates for Ofqual's consultations covering the phase three subjects and qualifications are as follows:

Consultation 1 (applicable to this report)

Live from 16th July 2015 to 24th September 2015

- Reformed GCSEs: astronomy; business; economics; engineering; geology; psychology and sociology; and
- Reformed A levels and AS qualifications: design and technology; environmental science; history of art; music technology and philosophy.

Consultation 2

Live 10th September 2015 until 5th November 2015

- Reformed GCSEs: ancient history; classical civilisation; electronics; film studies; media studies and statistics; and
- Reformed A levels and AS qualifications: accounting; ancient history; archaeology; classical civilisation; electronics; film studies; law; media studies and statistics.

Consultation 3

Live from 29th October 2015 until 4th January 2016

- Short course GCSE: physical education; and
- Reformed A levels and AS qualifications: geology; politics.

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