Department for Education

GCSE and A level subject content: equality analysis

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Contents

1. Introduction

This document assesses the equalities impact of new subject content for GCSEs in art and design, computer science, dance, music, and physical education, and for AS and A levels in dance, music, physical education, modern foreign languages, ancient languages, mathematics, further mathematics, and geography. Impact is assessed by reference to the protected characteristics of pupils or students. Section 149 of the Equality Act 2010 requires the Secretary of State, when exercising functions, to have due regard to the need:

- to eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act;
- to advance equality of opportunity between people who share a protected characteristic and those who do not; and
- to foster good relations between people who share a protected characteristic and those who do not.

The relevant protected characteristics are disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation. Age is not a relevant protected characteristic in relation to schools.

Pupils with Special Educational Needs (SEN), pupils eligible for Free School Meals (FSM), pupils with English as an Additional Language (EAL), and looked after children are not groups covered specifically by the Equality Act (although pupils within those groups may otherwise share a protected characteristic), but have been included in this analysis wherever possible. This is because those groups can be over-represented among low attaining pupils and we are keen to ensure the difficulties they face are not unnecessarily compounded by qualification reforms. They have not been included as a proxy for groups with protected characteristics.

2. Engagement and involvement

The public consultation opened on 16 July 2014 and closed on 19 September 2014. We received 967 responses from a range of stakeholders, including schools, equalities groups and awarding organisations.

In developing the new subject content, we asked awarding organisations to work with subject experts to establish what changes were needed to make sure the new qualifications are robust and rigorous. Subject experts included Arts Council England, Cultural Learning Alliance, National Society for Education in Art and Design, the Incorporated Society of Musicians, Music Education Council, National Association for Music in Higher Education, Sport England, Youth Sports Trust, the Association for Physical Education, Council for Dance Education and Training, The Place, Trinity Laban Conservatoire of Music and Dance, Youth Dance England, E-Skills UK, Naace, the Royal Academy of Engineering and the British Computer Society. The consultation proposals incorporated their suggestions for the new GCSEs in art and design, computer science, dance, music and physical education and A levels in dance, music and PE.

Giving universities a greater role in how A levels are developed was an important part of the Government's plans to reform the qualifications. Their involvement was important to ensure that A levels provide the appropriate foundation for degree-level study. Ofqual's consultation found support for much greater higher education involvement in A levels[1].

Responsibility for reviewing subject content for the remaining facilitating subjects, which are to be taught from September 2016, was therefore remitted to a new independent body, the A level Content Advisory Board (ALCAB)[2]. ALCAB was established by the Russell Group; a group of 24 of the UK's leading universities. ALCAB formed panels of subject experts, mainly from higher education and subject associations, to review A levels and make recommendations for change. The ALCAB panels' reports were published on 15 July.

This impact assessment also considers the proposed subject content, based on ALCAB's recommendations, for A levels in ancient languages, modern foreign languages, mathematics, further mathematics and geography.

[1] On 9 November 2014 Ofqual published the response to this consultation which can be found on its website at http://www.ofqual.gov.uk/qualifications-and-assessments/qualification-reform/a-level-reform/

[2] It was decided that A levels in modern foreign languages, mathematics, further mathematics and geography required more significant change and development time and that these subjects would be reformed for first teaching in September 2016. Following a request from the Department, the Russell Group of universities set up ALCAB to review subject content in these subjects, together with ancient and classical languages.

3. Description of the policy

The government is reforming GCSEs and A levels to ensure that they prepare students better for further and higher education, and employment. GCSEs are being reformed so that they set expectations which match those of the highest performing countries, with rigorous assessment that provides a reliable measure of students' achievement.

Reformed GCSEs will be respected qualifications in which students, employers and further and higher education institutions can have full confidence. They will provide students with more fulfilling and demanding courses of study. GCSEs will continue to be universal qualifications, entered by the same proportion of students as currently.

The new A levels will be linear qualifications that make sure students develop the skills and knowledge needed for progression to undergraduate study.

Reforms to these qualifications are already underway. GCSE subject content in English literature, English language and mathematics was published in November 2013, and the new qualifications will be taught from September 2015. GCSE subject content in ancient languages, geography, history, modern foreign languages and science, which will be taught from September 2016, was published in April 2014.

At AS and A level, subject content in art and design, biology, business, chemistry, computer science, economics, English language, English literature, English language and literature, history, physics, psychology, and sociology was published in April 2014. These new qualifications will be taught from September 2015.

GCSE and A level reforms are not being introduced in isolation. Reforms across the education system will benefit all pupils and lead to improvements in teaching and learning so that pupil performance will rise to meet the new higher standard. Many policies, for example the introduction of the Pupil Premium, SEN reforms, and the expansion of the academies programme, have a particular focus on those pupils left behind currently. A summary of DfE's programmes to support teaching for pupils with SEN is set out at Annex A.

4. Evidence base

Our analysis of the potential impact of the proposed GCSE content in art and design, computer science, dance, music, and physical education, and of AS and A level content in dance, music, physical education, modern foreign languages, ancient languages, mathematics and further mathematics and geography has been informed by:

- meetings with employers, stakeholders, subject associations and awarding organisations.
- a review of relevant literature, as referenced throughout the equality impact assessment
- responses to our GCSE subject content consultation, including from organisations representing the interests of groups with a protected characteristic (Annex B). DfE asked the following questions in the consultation on the GCSE and A level subjects under analysis here:
    - Do you think that any of the proposals have the potential to have a disproportionate impact, positive or negative, on specific students, in particular those with 'relevant protected characteristics'? (The relevant protected characteristics are disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation.) Please provide evidence to support your response.
    - How could any adverse impact be reduced and how could the subject content of GCSEs and/or A levels be altered to better advance equality of opportunity between persons who share a protected characteristic and those who do not share it? Please provide evidence to support your response.

5. Evidence review

The following summary of evidence draws on evidence in relevant literature, responses to the public consultation on the GCSE and A level content, and views expressed by stakeholders in face-to-face meetings in developing subject content.

In total, 138 respondents to the public consultation answered the question about potential disproportionate impact on students with relevant protected characteristics (from 967 respondents to the overall consultation). 58 stated that it would have a negative impact on those students with one or more protected characteristics. 52 said it would have no impact. 28 respondents were not sure if it would have an impact.

In the sections which follow, we have considered those concerns which have been raised by respondents to the consultation alongside other issues which we have identified through our own consideration of the relevant issues. In all cases our consideration of the issues has been informed by our previous work with stakeholders in developing subject content and the relevant literature.

5.1 Increased demand across all GCSEs

The government consulted on reforming key stage 4 qualifications in 2012 and published its response and its equality impact assessment on decisions early in 2013. The response stated that: reformed GCSEs should remain universal qualifications, accessible, with good teaching, to the same proportion of students as currently sit GCSE exams at the end of key stage 4. It also stated that at the level of what is widely considered to be a pass (currently indicated by a grade C) there must be an increase in demand to reflect that of high-performing jurisdictions. At the top end, the new qualification should prepare students properly to progress to A levels or other study. This should be achieved through more challenging subject content and more rigorous assessment structures.

GCSE subject content was developed in the context of these decisions. This impact assessment considers the proposals for GCSEs in music, art and design, dance, computer science and physical education.

Impact

Seven stakeholders who responded to the equalities questions in the consultation raised concerns that increasing the demand of subject content would impact on less able students. Five of the responses were from teaching professionals, one was a personal response and the last was from a professional dance company.

Whilst the less able are not a protected group under equalities legislation, there are some students with specific characteristics which may impact on their ability in some subjects,

including EAL/ESL students, dyslexic students, those with SEN and those with certain disabilities.

The concerns raised primarily related to subjects which historically have had a large practical element to assessment, notably Physical Education, where one respondent suggested the new content discriminates “against practically intelligent students and kinaesthetic learners”, Music, and Dance, where a respondent representing a dance company flagged a risk that the proposed new content could be “elitist to those who are only academically bright and therefore losing the whole point of dance!”

Another respondent’s expressed a concern that, “students who have learning difficulties can often be creative and 'fly' in more practical based subjects. The new proposals for dance will put these students at a disadvantage and possibly prevent them opting for the subject.”

The other comments about the impact on less academically able students related to A levels in modern foreign languages, mathematics and further mathematics. However, unlike with GCSEs, there is no intention to increase demand overall in any A level subject. Those aspects of the changes which may increase the challenges for members of specific equalities groups have been addressed in the individual subject sections of this document.

In relation to the concerns about GCSEs, DfE considered the evidence it had gathered during its September 2012 consultation on reforming key stage 4 qualifications, which indicated that a culture of high expectations is one of several consistent factors essential to high student attainment and good progress. The evidence suggested that, with the right teaching and learning, all students will benefit from those higher expectations.

A discussion of this evidence can be found in the equality impact assessment we published in 2013.[3] Our review of research indicated that the following factors are shown to have the greatest impact on preventing and responding to low student attainment:

- effective teaching;
- a culture of high expectations;
- understanding and meeting the needs of all students;
- engaging and relevant curriculum;
- initial assessments and on-going monitoring;
- effective transition;
- appropriate infrastructure; and

[3] GCSE Reform Equality Analysis, DfE, March 2013

- accountability at all levels.

Andreas Schleicher, Deputy Director for Education and Skills at the OECD, has said that a common factor in high-performing systems is “the belief in the possibilities for all children to achieve” and there is evidence that suggests that, with the right teaching and learning, students will benefit from those higher expectations[4].

The specific concerns about the impact on less able students in dance, physical education and music refer to the increase in theoretical content and concomitant decrease in practical content. These concerns have been addressed in more detail in the relevant subject sections. The intention of reform is to ensure parity of quality and challenge across all subjects. We wish to ensure that students studying GCSEs or A levels in dance, physical education or music will achieve a qualification whose value is recognised alongside other GCSEs, and which prepares them for further study or employment.

The impact on the less academically able must also be considered alongside the impact on the less physically able, such as those students with certain physical disabilities and those managing pregnancy or physical impacts of gender reassignment. Reduced emphasis on practical performance can be seen as a positive impact on students, for whom practical performance can be more challenging, thereby making these subjects more accessible and appealing for students with relevant protected characteristics.

Conclusion

Our review of evidence indicates that a culture of high expectations is one of several consistent factors essential to high student attainment and good progress for all students, and particularly in responding to low student attainment. For this reason GCSE reform is specifically intended to raise the demand for all students; both more and less academically able. We feel the increased challenge is justified by the benefits we expect it to deliver in the form of higher attainment and better preparation for further study or employment.

We acknowledge that the increased demand may have a greater impact on some students who have characteristics which can make aspects of academic learning more challenging, for example pupils with dyslexia or English as an additional language. However, we believe appropriate provision can, and should, be made to mitigate and support pupils with any additional challenge, arising from increased demand, in order to enable those pupils to benefit from greater equality of opportunity that will come from attaining higher standards. These provisions may take a number of forms including additional teacher support, extra time in exams and appropriate lesson differentiation, for example.

[4] Ofsted (2009) Twelve outstanding secondary schools: Excelling against the odds, OECD (2010) PISA 2009 Results: What Makes A School Successful

Overall, DfE believes that all pupils will benefit from the higher aspirations, attainment outcomes and strong reputation expected of reformed GCSEs. It is of no benefit to any student to pass a qualification that does not provide evidence – for employers or others – of their competence in key areas that are essential to progression.

5.2 Music GCSE and A level

Music composed in the western classical tradition

In consulting on the Music GCSE and A level subject content, we proposed that at least one area of study must be drawn from music composed in the western classical tradition between 1700 and 1900.

Further to the consultation, and in the light of the feedback received, this requirement has been amended slightly. The period in question has been extended to cover 1650 to 1910. The new content has been further amended such that all or the majority of music studied in this area of study must have been composed between these dates. This allows Awarding Organisation the flexibility to include some earlier or later western classical music without having to put it in a separate programme of study.

As GCSE music specifications must require students to demonstrate knowledge, understanding and skills through four areas of study, the proposed requirement to teach music composed in the western classical tradition between 1650 and 1910 amounts to a quarter of the course content. At AS, there are two areas of study, so the proposed requirement to teach music composed in the western classical tradition between 1650 and 1910 amounts to half of the course content. At A level, three areas of study were proposed and so the western classical music requirement constitutes a third of the course content.

Impact

Eleven respondents to the consultation raised concerns that this requirement might impact on pupils with protected characteristics in relation to ethnicity, faith, gender and sexual orientation. It has also been suggested that that the impact might extend to more disadvantaged members of all ethnic groups, including white British. The respondents represented a range of organisations including schools and colleges, higher education institutions, advocacy organisations and membership bodies.

In relation to different ethnic and faith groups, the concern is that the requirement may disadvantage those who have not grown up in cultures where they have previously been exposed to western classical music of this era. One respondent said the requirement could “have a disproportionately negative impact on students whose cultural heritage includes music from other traditions, such as Indian classical, Asian popular or traditional South American music. It sends a very damaging measure of their worth in comparison to western classical music.”

Two respondents raised the same argument in relation to disadvantage, where students from less affluent backgrounds are also less likely to have been exposed to western classical music from this period. This argument rests on an assumption that prior knowledge of the music is advantageous for performance in the qualification. On this

point, “Building Background Knowledge for Academic Achievement” by Robert J Marzano, lists a range of academic research which shows that “what students already know about the content is one of the strongest indicators of how well they will learn new information relative to the content.”[5]

Five respondents noted concerns in relation to gender. Their concern was that western classical music from 1700 to 1900 is dominated by male composers and therefore does not provide the same access to, or representation of, female composers’ work as more recent periods of history or music from other cultures. One respondent from the academic community said, “The implicit bias towards works by European male composers and performers is a misrepresentation of musical history and an unnecessary political intervention that will have a negative impact upon the perception of 'classical' music. For example, as 'evidence', I invite the panel to compare how many female composers or performers can be identified from the pre-1900 period, and then compare that number to post-1900.”

In the same way, there is also potentially less representation of composers from minority ethnic, faith and sexual orientation groups in western classical music from 1650 to 1910 than in other periods or genres. We have considered the arguments with all of these groups in mind.

We have assessed the two separate but related concerns here; the first being the possible disadvantage to pupils who have had less exposure to western classical music by virtue of their ethnicity or socio-economic status, and the second being the possible negative impact on pupils with those protected characteristics which are less well represented in this period and genre. The latter might include women, those with a disability, homosexuals and those undergoing gender reassignment as well as members of minority ethnic and faith groups. The concern is that under-representation of music from members of these groups might create negative perceptions of its validity and worth in comparison to western classical music, thereby affecting the self-esteem of members of those groups.

Whilst these are valid concerns, the requirement for 25% of the GSCE content to draw on western classical music from 1650 to 1910 in no way limits the study of music from other cultures and eras in the other 75% of the course. Indeed, the concerns raised are mitigated by the requirement that at least one other area of study (i.e. a further 25%) must not be drawn from western classical music from 1650 to 1910. This provides scope to focus on music from other protected groups. With four programmes of study in total, a broad range of music can be studied to represent composers with diverse characteristics in relation to ethnicity, faith, gender, disability, sexual orientation and gender reassignment.

[5] Marzano, RJ, 2004, Building Background Knowledge for Academic Achievement, ASCD.

The concerns raised are also further mitigated by the changes that have been made following the consultation, which allow flexibility for some of the music studied in this area of study to be composed later than 1910, when there has been much greater prominence of female composers.

The concerns about the narrow demographic focus of the subject content are more pronounced at A level and AS than at GCSE level because the requirement to study western classical music between 1650 and 1910 constitutes a larger proportion of the areas of study. However, it remains the case that the other areas of study can be used to introduce a more diverse range of music, representing a wider selection of protected characteristics.

Overall, the Government's aims in reforming A levels include the desire to ensure qualifications prepare students as well as possible for further study or employment. We feel that the relatively greater focus on western classical music between 1650 and 1910 at AS and A level is justified by the increased likelihood of students going on to higher education in music, where this knowledge will be a valuable foundation for further study.

This view is supported by one respondent to the consultation, who wrote: "On commencement of my undergraduate studies in Bristol, I realised how ill-equipped my A level studies had made me for undergraduate study, lagging way behind my privately schooled colleagues, who formed the vast majority of my cohort. I realise that not everyone is going to study GCSE and A level music to go on to pursue it at university, but the state has a responsibility to ensure that those who do are adequately prepared. The introduction of a 1700-1900 western classical music requirement could address this."

Whilst concerns about the advantage to students who are already familiar with western classical music are valid for both GCSE and A level, there would be potential advantages to any group of students who might already be familiar with the music, whatever genre or era was studied. Students who are more familiar with western classical music may be less familiar with styles and genres of music covered in the other areas of study. Teacher differentiation and support is there to help students in music, as in all subjects, who may embark on the qualification with a lower level of prior knowledge and attainment than other students. In addition, the national curriculum aims to ensure that pupils perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions, including the works of the great composers and musicians.

Another contributor to the consultation from academia said, "Music means something to everyone, but not the same thing. Particularly at GCSE level, this personal link with music through race, religion, beliefs, identity etc. should be a hook into learning in order to carefully guide young people to explore music which they do not yet know about." It is the value of being introduced to new music which further emphasises the benefit of the inclusion of western classical music for students from backgrounds where they might not have had prior exposure to it, in the same way that the other programmes of study can be used to introduce children who do have prior knowledge of it to other forms of music.

We feel that the benefits of including western classical music from 1650 to 1910 in helping to open up the option of further study in music to disadvantaged students outweigh any disadvantage arising from lack of prior knowledge, especially given that this can be mitigated with good teaching.

Conclusion

We have concluded that it is reasonable and justifiable for all or the majority of music in one area of study to be drawn from western classical music from 1650 to 1910, given that the other areas of study can be used to cover composers representing a broader range of ethnicity, faith, gender and sexual orientation. We believe that the impact on students without prior knowledge of this genre and period of music can be mitigated by good quality teaching and support. There is a clear positive impact in helping to prepare all students who may wish to continue with further study in music.

Performance requirements

In the consultation on GCSE music, we proposed new, more demanding expectations of students in terms of their performing and composing, with a requirement for all students to perform as part of an ensemble and new minimum lengths of time for which candidates must perform and compose, to ensure greater consistency between specifications.

Alongside this, Ofqual consulted on proposals that performance will constitute 30% of the reformed GCSE in music. In the current GCSE there is flexibility for between 30% and 40%.

Impact

In responding to the impact on those with protected characteristics, a very small number of independent respondents (2) expressed concern about the possible reduction in the proportion of the performance component of GCSE music. Concerns centred on the possibility that a reduction in the weighting of the performance component might lead to a reduction in those teaching hours devoted to practical performance skills. One respondent expressed the concern that if this was the case, there would be a disproportionate impact on less affluent students whose parents cannot afford to supplement classroom teaching with outside lessons: “This is dangerous, because it is making it more difficult for poor children to learn performance skills.”

However, the assessment weighting given to the performance component is a matter for Ofqual to establish and therefore falls outside DfE’s remit in this equality impact assessment. DfE’s priority is to make sure that the standard of performance expected of students is appropriately demanding. The proposals include new, more demanding, expectations of students in terms of their performing. We would, therefore, expect a comparable amount of teaching time to be given to students as is currently provided.

Furthermore, the introduction of a requirement for ensemble performance means that more teaching input can be focused on group performance, helping to support efficient use of teaching time.

Four other respondents raised concerns that regardless of weighting, the demands of the performance requirements are such that they might disadvantage students whose parents cannot afford to supplement school lessons with private music tuition. The Arts Council wrote: “There is evidence to show that there are particular economic barriers common across protected characteristics that present a real issue for engagement with music. For example there is concern that there is a ‘hidden’ requirement of practical ability within the GCSE that can disadvantage those students who are unable to undertake additional private instrumental lessons.”

Similarly, a respondent from the higher education sector said, “The performance requirements potentially disadvantage those from less well-off backgrounds, given that so much performance tuition has to be paid for by parents. See the ABRSM’s report issued at the beginning of this week (14 Sept 2014) which referred specifically to a high level of achievement in musical performance increasingly becoming a preserve of those from better-off families.”

However, students who receive private tuition already have an advantage in the current performance component of GCSE music. Raising the demand of the performance requirements is not intended to advantage them further by assessing them on aspects of performance they have learned about privately. Instead, by making the increased demand part of the compulsory subject content, it is intended to ensure that all students are taught about those aspects of performance in the school classroom, thus making additional private tuition less of an advantage. In this way it is intended to help level the playing field rather than polarise it further. This, in turn, should provide greater equality of opportunity for members of all groups by making further study of music accessible to a wider range of students.

Furthermore, pupil premium is provided to schools to help support improved learning outcomes for the most disadvantaged pupils, who are those most likely to experience the greatest disadvantage in relation to more affluent students. This money is not ring-fenced and so might be used to help those students who wish to undertake additional music lessons, through peripatetic teaching in school, for example.

In terms of the broader accessibility of the performing requirement, one respondent noted positively that, “the Equality Act 40% exemption rule, as laid out in the JCQ adjustments for candidates with disabilities document, ensures no disproportionate impact on those unable to practically perform on an instrument.”

Section 96 of the 2010 Equality Act outlines the specific obligations for qualifications bodies and includes the duty to make reasonable adjustments to the extent specified by the appropriate regulator (in this case Ofqual). Ofqual allows reasonable adjustments to

qualifications in the form of an exemption for a student from up to 40% of the marks available for a qualification. In light of Ofqual's determination, the JCQ's "Adjustments for candidates with disabilities or learning difficulties" allow an exemption agreement to be reached by an awarding body, before the examination, for a candidate to miss a component or components amounting to no more than 40% of a GCSE or A level qualification.[6]

Conclusion

We acknowledge the advantage held by students who undertake private music lessons in addition to classroom teaching. However the changes being made will help create a level playing field across all students and educational contexts. As with all subjects, the increase in the level of demand can be addressed with good quality teaching and with additional support to disadvantaged students, including through effective use of the pupil premium.

[6] http://www.jcq.org.uk/exams-office/access-arrangements-and-special-consideration/regulations-and-guidance/access-arrangements-and-reasonable-adjustments-2014-2015

5.3 Dance GCSE and A level

Minimum performance requirement

The DfE consultation set out the minimum range of content for specifications in dance. At GCSE there was a requirement to perform for a minimum of 3.5 minutes in one or more dances with an appropriate level of sophistication, complexity and challenge. At AS it was proposed that students be required to perform a solo and a duet or trio, both of two to three minutes duration. At A level a solo of two to three minutes was proposed and a three to four minute ensemble.

Following the public consultation, minimum performance times have been removed from the subject content. These will now be set out in Ofqual's General Conditions of Recognition, which lay down requirements that apply to all awarding organisations and qualifications. The revised content specifies that at GCSE students will be required to perform one or more dances with an appropriate level of sophistication, complexity and challenge. At AS level students will be required to perform a solo performance of their own choreography and a duet or trio which investigates characteristics of style within a genre(s). At A level students will be required to perform a solo based on a specific practitioner demonstrating embodied knowledge of the practitioner's movement/choreographic style, as well as a quartet performance.

Impact

Only five respondents to the consultation commented specifically on the impact to students studying dance. Two respondents made specific reference to the potential impact of the performance requirement on disabled students. One respondent noted that, "Currently there is no reference within the subject content to acknowledge how the qualification could be taught to ensure that students with disability are not disadvantaged."

Whilst students managing pregnancy and gender reassignment are not disabled, there may be an impact on their ability to participate in certain physical activities and we therefore include them in our evaluation in this section.

The plethora of dance companies featuring disabled dancers in the UK alone is evidence that dance performance can be accessible to individuals with physical disabilities.[7] The Awarding Organisation responsible for GCSE and A level Dance (AQA) has confirmed that the practical performing part of dance is accessible to those with a range of disabilities. If a school or college has a student with a specific disability that falls outside the range of Special Consideration, an adapted dance can be applied for. Every candidate is considered individually, cross-referencing capability with achievement, so as

[7] See http://www.disabilityartsonline.org.uk/Organisations for a list of organisations which includes several dance companies featuring disabled dancers.

to ensure that the candidate is never penalised for being unable to access any aspect of the indicative content. This is already the case for the current qualifications and will not change in the light of reformed content.[8]

One respondent specifically raised the question of assessment, saying “physical disability will prevent a student being able to achieve - how would they be assessed for their level of technical ability and their ability to perform movement content accurately?”

Assessment criteria fall outside the scope of this consultation on subject content. This issue will be addressed by Ofqual and Awarding Organisations in the development of specifications. DfE is confident on the basis of information provided by AQA that appropriate assessment guidance can be formulated to ensure that dance specifications are accessible to students with disabilities. AQA have developed an equalities policy which ensures that the assessment criteria are considered in exactly the same way as for able-bodied candidates, but applied according to the specific physical capabilities of the particular student.

Conclusion

We have considered the possibility that the performance requirement might generate accessibility issues for disabled students and those managing pregnancy or gender reassignment. Dance is a performing art and, as such, we believe that a performance component is an important part of assessment in this field. However, the evidence is that dance is an inclusive art form, accessible to people with a wide range of physical abilities and disabilities – and, indeed, the removal of a performance requirement would send a negative message to the contrary.

Whilst we acknowledge the restrictions that certain disabilities and aspects of pregnancy and gender reassignment might place on the range of dance activity that is accessible to some students, we are confident that the provisions made by Ofqual, the Joint Council for Qualifications and the awarding body itself are sufficient to avoid any detrimental impact to pupils with these characteristics.

Experience of performance is an important part of developing the knowledge and skills for further study or employment in this field. It is well balanced by those other aspects of the subject content which focus on the theory, understanding and appreciation of dance.

We have found no evidence to suggest any disproportional impact is likely to affect pupils with other protected characteristics relating to gender, faith or ethnicity.

Relative weighting of theory and practice

The consultation proposals for GCSE dance included increased demand in order to better support progression to AS and A level through enhanced theoretical content,

[8] See section 3.2: http://filestore.aqa.org.uk/subjects/AQA-4230-W-SP-14.PDF

including more emphasis on critical appreciation and knowledge and understanding of professional works and the context of choreography and performance. Alongside this, Ofqual consulted on changes to the weighting of practical assessment from the current 80% practical and 20% exam to 60% practical and 40% exam.

At A level the subject content aims to support progression to a range of university courses by specifying the need for critical evaluation, reflective analysis, embodied knowledge and an understanding of styles and contexts.

Impact

Of the five respondents to the consultation who commented specifically on the impact to students taking studying dance, three raised concerns about the greater emphasis on theory. They expressed concerns that this is likely to have a disproportionate impact on the less able, including those with learning difficulties. One respondent wrote, “Students who have learning difficulties can often be creative and 'fly' in more practical based subjects. The new proposals for dance will put these students at a disadvantage and possibly prevent them opting for the subject.”

Another contribution said, “The increased focus on theoretical knowledge, suggested by reduction in the proportion of non-exam assessment, has the potential to reduce practical teaching time and therefore disadvantage students falling under protected characteristics who may experience economic barriers to accessing additional practical dance tuition outside of core teaching.” As with music, this suggests that the less affluent will be at a disadvantage compared to those who can afford private lessons to supplement in-school teaching.

We have considered the arguments and acknowledge that a greater emphasis on theory and a higher level of demand may generate increased challenge for students with learning difficulties, as it will for all students. However, as with music, the subject content for dance is intended to help better equip all students for further study or employment and a qualification that did not do so would be of less value to all students, including those with learning difficulties. This concern is best addressed with good quality teaching, appropriate differentiation and suitable support for students with learning difficulties.

There is no evidence to suggest that the disadvantage to students who are unable to afford additional private teaching will be any greater than it is currently. Because the practical element is being reduced, the advantage to students who are also taking private lessons will actually account for a smaller proportion of their final mark. However, if there is any perceived increase in impact on disadvantaged students, schools have the discretion to use pupil premium to help them access further support or resources.

Conclusion

We feel that the emphasis on theoretical content is reasonable and justifiable to support the Government's objective to raise the demand of GCSEs and to help better prepare students for further work and study. Whilst disproportionate adverse impact on the less able is unlikely, it can be mitigated with appropriate differentiation and additional support. A lower ability should not be a reason to reduce expectations, but rather a reason to provide the right teaching, support and encouragement to help meet them.

The increase in emphasis on theoretical content can also be seen as a positive impact for those students with an interest in dance who face greater challenge in the practical performance aspects by reason of disability, pregnancy or gender reassignment.

We have no reason to believe there will be any specific impact on members of minority ethnic, faith and sexual orientation groups.

5.4 Computer Science GCSE

As there is currently no subject content for GCSE computer science this is one subject area where we are not considering the impact merely of changes to the subject content, but of the whole subject content. Only a tiny number of consultation respondents (2) commented specifically on the proposals for GCSE computer science in the public consultation, which suggests that this area is generally not contentious. We have, however, reviewed a range of literature to ensure any potential issues have been considered.

Impact

Both contributions related specifically to the impact on girls as a protected group under legislation relating to gender.

One respondent said, “There is a weighting to written exams which is likely to reduce the chances of girls having success. Coursework has proved helpful in enabling girls, particularly in computer science.”

Research findings on this issue are mixed. A 2010 research paper by Jackson, Paechter and Renold showed that girls tend to do better at coursework, while boys perform better in exams.[9] However, a 2013 research paper by Elwood suggests that the influence of coursework in contributing to girls’ success is more complex than it appears. Elwood shows that girls’ results were on an upward trajectory before the move to increased coursework in 1988 and continued after the reduction in GCSE and A level coursework.[10] A more recent 2014 paper reviewing a range of literature on coursework and examinations shows that “the difference between coursework marks and examination marks tends to be greater in some disciplines than others, but it appears to be similar in men and women and in students from different ethnic groups.”[11] This suggests that whilst an individual’s performance can vary across coursework and examination, there are no significant differences in the extent of this variation across gender and ethnic groups.

As the research is inconclusive, we have looked more closely at the specifics of recent performance in Computing and ICT. Both GCSE Computing and GCSE ICT performance data for 2014 show girls outperforming boys in their overall results.[12] It could therefore be argued that even if girls do perform better in coursework than boys, a reduction in coursework and increase in exam content will therefore simply redress an advantage which currently exists for girls. Given recent GCSE results, we do not expect to see boys outperforming girls as a consequence. The evidence suggests that girls should be as well-equipped as boys to do well in exams with appropriate teaching. Girls also

[9] Jackson, Paechter and Renold, 2010, Girls and Education 3 – 16, Open University Press
[10] Elwood, J. 2005, Gender and Achievement: what have exams got to do with it, Oxford Review of Education Policy.
[11] Richardson J, 2014, Coursework versus examinations in end-of-module assessment: a literature review, Routledge
[12] Joint Council for Qualifications, Provisional GCSE Results, June 2014

outperform boys in other subjects with a low coursework content, such as modern foreign languages.[13] If the concern is perceived to relate to computer science in particular, this can be addressed with strong teaching and appropriate careers advice to motivate girls by highlighting the benefits of qualifications in computer science.

This last point relates to the second respondent's slightly different concern that, "The abandonment of ICT in favour of computing in computer science is likely to alienate vast numbers of female students".

It is true that the current GCSE Computing is taken by larger numbers of male students than female students. Figures for summer 2014 GCSEs published by the Joint Council for Qualifications show that only 2568 girls sat GCSE Computing compared to 14205 boys, while 41465 girls took GCSE ICT compared to 55346 boys. GCSE ICT is one of a group of subjects available for possible reform for first teaching in 2017.

Several researchers have shown a decline in overall numbers of students taking GCSE ICT since 2005[14]. Data for 2013 showed the first increase for eight years, although, the proportion of female candidates decreased, from 46% in 2012 to 44% in 2013. These facts suggest that there was a strong rationale for reform in this area with the aim of creating broader appeal to both girls and boys.

A 2011 paper titled, "'It's boring': female students' experience of studying ICT and computing"[15] showed evidence that girls in particular struggled to see the relevance of aspects of GCSE ICT and found them boring. The reforms embodied in the proposed content for GCSE Computer Science were designed specifically to address concerns such as these, to make the subject more interesting and more relevant to the needs of industry and to students' possible future careers.

Whilst we acknowledge concerns that computer science may currently appeal to a greater number of boys than girls, other research has shown that the impact of psychological gender (sex and sex role) does not influence attitudes or cognition towards computers.[16] The reasons for opting to study GCSE Computing or ICT may therefore lie elsewhere.

Whilst not directly about computer science and ICT, the UPMAP project (Understanding Participation rates in post-16 Mathematics and Physics) showed that perceived material gain, teacher encouragement and a belief that they can do well in the subject can be highly influential factors influencing students' subject choice.[17]

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[13] Elwood, J. 2005, Gender and Achievement: what have exams got to do with it, Oxford Review of Education Policy

[14] e.g. Palmen. R, 2011, Girls, Boys and ICT in the UK, International Journal of Gender, Science and Technology

[15] Pau, Hall and Grace, 2011, It's boring: female students' experience of studying ICT and computing, SSR.

[16] See Palmen. R, 2011, Girls, Boys and ICT in the UK, International Journal of Gender, Science and Technology (where a range of relevant research is cited)

[17] See the TISME paper, What influences participation in science and mathematics? A briefing paper from the Targeted Initiative on Science and Mathematics Education

We therefore believe that appropriate teaching and careers guidance have the potential make computer science just as appealing to girls as it is to boys. The new content has been developed to be more interesting and relevant for both. We do not believe there will be a disproportionate impact on girls, but we will, however, monitor the situation over time.

Conclusion

As girls outperform boys in both ICT and Computing GCSEs at present, DfE feels that a move to reduce the coursework component and increase the exam component is unlikely to generate evidence of an advantage to boys and there is insufficient reason to maintain the status quo.

There is no reason to believe that the new content for GCSE Computer Science is any less likely to appeal to girls than GCSE Computing currently does. Indeed, the new content is intended to benefit all pupils by making the subject more interesting and more relevant to a range of possible future careers. The subject is being updated to stay abreast of the fast moving world of technology.

We have not come across any evidence to suggest there is likely to be any adverse impact on pupils with other protected characteristics.

5.5 GCSE Art and Design

Use of visual language

The level of demand in the proposals for the reformed art and design GCSE has been increased by requiring students to show knowledge and understanding of communicating through visual language using formal elements. This will ensure that colour, line, tone and texture feature in all GCSE specifications.

Impact

Only three respondents commented on proposals for the reformed GCSE art and design, with the emphasis largely being on positive impacts. These included responses from a school, an awarding organisation and a non-departmental public body representing the arts sector.

One respondent said, “Overall the proposal for art and design GCSE is likely to prove very accessible to students falling under particular protected characteristics. In particular those with learning disabilities and nonverbal learners are likely to find the subject accessible, with research demonstrating real links between dyslexia and visual spatial ability.”

However, whilst acknowledging that “visual language is clearly at the heart of the discipline and practice of Art and Design”, one awarding organisation expressed a concern that “the exclusive use of ‘visual language’ may cause a potential barrier to, for example, visually-impaired students.”

This is a valid concern and it will be very important for appropriate differentiation to be provided for visually impaired students. The proposed subject content refers to a number of formal elements as ways of communicating through visual language. These include: colour, line, form, tone and texture. Whilst colour and tone may be more difficult for some visually impaired students to engage with, line form and texture are more accessible concepts and there are many resources available online to support the teaching of art to visually impaired students and which emphasise the benefits for the students of engaging with art.[18]

The same respondent suggested that, “Art and design students could be encouraged to organise, select and communicate ideas, solutions and responses, and present them in a range of visual, tactile and/or sensory forms. This would allow a visually-impaired student to use other means of communication including sculpture, installation and sound art.” We feel that work of this nature is not precluded by the proposed subject content and would expect such differentiation to be possible within specifications.

[18] e.g. http://www.teachingvisuallyimpaired.com/art.html, or http://www.tsbvi.edu/component/content/article/102-recreation-and-leisure/3197-art-a-great-tool-for-teaching-students-with-visual-impairments

Conclusion

Art and design is a visual subject and this is the reason for increased emphasis on use of visual language in the GCSE. However, it should be accessible to all students, and we would expect flexibility to support the engagement of students with visual impairments to be built into the development of the specifications and to be reinforced by appropriate teacher differentiation. We do not feel that the subject content itself impedes this.

Economic Barriers

The only other concern expressed in relation to GCSE Art and Design refers to possible economic barriers to students from less affluent families.

Impact

This issue was raised by one respondent from the Arts Council, who wrote “For young people who may wish to progress to further study and an eventual career within Art and Design, there are particular economic barriers common across protected characteristics which have not been addressed.”

There is significant research evidence to show that more affluent children perform better than more disadvantaged children across school education in general, with low income a strong predictor of lower attainment.[19] However, there are a broad range of factors which contribute to this disparity, not all of which are direct consequences of access to resources. We have found no specific evidence that attainment in GCSE Art and Design is directly affected by economic barriers. However, we must again emphasise that the pupil premium exists to support those students experiencing economic disadvantage.[20]

Furthermore, there is no evidence to suggest that any changes to the content of GCSE Art and Design as proposed in the reform consultation increase the economic barriers to disadvantaged students. As such there is no direct impact as a result of the reform proposals.

Conclusion

Economic disadvantage can impact on students’ performance across a range of subject areas, but there are no changes to the subject content of GCSE Art and Design which are likely to increase that impact or which pupil premium could not be used to help mitigate.

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[19] e.g. Hirsch, D, 2007, Experiences of Poverty and Educational Disadvantage, Joseph Rowntree Foundation.

[20] In the 2014 to 2015 financial year, schools will receive the following funding for each child registered as eligible for free school meals at any point in the last 6 years: £1,300 for primary-aged pupils and £935 for secondary-aged pupils. Schools also receive £1,900 for each pupil who has been looked after for 1 day or more, or has been adopted from care , or has left care under a special guardianship order, a residence order or a child arrangement order

We have found no evidence to raise concerns that pupils with any other protected characteristics are likely to be disproportionately impacted by virtue of those characteristics.

5.6 Physical Education GCSE and A level

Increased emphasis on theoretical knowledge

The new subject content for GCSE Physical Education reflects increased rigour by sharpening the definition of what is expected of students and emphasising the theoretical knowledge needed to underpin physical activity and practical performance.

The proposed A level content reflects the changes at GCSE. The content emphasises the theoretical understanding and skills needed for study at this level. Students will need to demonstrate their ability to use theories, modelling and data analysis to evaluate physical activity and to implement strategies or compositional ideas.

Impact

Three respondents raised concerns about the potential impact on less able students of increasing the emphasis on theory, with the focus primarily on GCSE content. While less able students are not a protected group under equalities legislation, it may be that certain individuals with a protected characteristic, such as those with learning difficulties, are more likely to fall into this group. This is reflected in comments from one respondent that, “Pupils with EAL and SEN are more likely to be disadvantaged if the GCSE PE proposed changes take place.”

One comment from the teaching workforce is that, “weaker students (in terms of theory ability) will no longer be able to achieve decent overall grades as they won't be recognised proportionately for their practical ability. Fundamentally it will no longer be physical education rather physical theory.”

Following the public consultation, we have amended the GCSE content to require students to be assessed in three rather than two sports or activities, including at least one team sport or activity and one individual sport or activity. This will better ensure students are able to properly demonstrate a range of practical skills that are integral to this subject and will help to address some of the concerns about the impact on students who may be less academically able, but who excel in physical activity. There has been no change at AS and A level and the requirement remains the same as outlined in the consultation, namely that they will be assessed in the role of player/performer or coach in one activity.

Despite the change at GCSE, there remains some increase in the emphasis on theoretical content at both GCSE and A level. As with all subjects being reformed, the intention is to ensure that GCSE and A level Physical Education will be respected qualifications in which students, employers and further and higher education institutions can have full confidence. Increasing the theoretical content will help to ensure they are valued alongside other GCSEs and A levels. As such, they will best prepare students for further study or employment.

To help them manage the theoretical demands of the subject, less able students will be supported in the same ways as they are in other subject areas, with appropriate differentiation and additional support. Students with Special Educational Needs and English as an Additional Language, would, in particular, be expected to receive appropriate, targeted support.

As with dance, increasing the theoretical content whilst reducing the practical element of Physical Education will also positively impact on students who are less able physically, allowing them to engage with the subject in other ways. This includes pupils managing disability, pregnancy and gender reassignment.

Conclusion

Further to the public consultation, we have made some changes to the GCSE Physical Education subject content in response to concerns that assessment in two sports would not be sufficient to allow students to properly demonstrate the practical skills that are integral to this subject.

To the extent that the remaining increase in emphasis on theory at both GCSE and A level presents a greater challenge for less able pupils, DfE feels the change is justified by the rationale and purpose of reform outlined above. As with all subjects, any negative impact on students who are finding the subject matter demanding can be supported with appropriate teacher differentiation and additional support. We feel that it is more important for them to study a subject with an appropriate level of demand than to achieve a less rigorous qualification which will not be viewed as having the same value for further study or employment.

Reduced list of practical activities

To ensure comparability between practical activities, awarding organisations have proposed changes to the number of options available, which has led to the removal of some current options, such as rounders.

The DfE consultation proposed that at GCSE pupils would be assessed in the role of player/performer in two different activities rather than four as they are currently, and that at AS and A level students would be assessed in the role of player/performer or coach in one activity. Following consultation the number of activities at GCSE has been increased to three.

Impact

Concerns about the impact of reducing the number of options available for the practical component of GCSE and A level Physical Education focus primarily on equalities legislation relating to gender. A number of respondents have expressed concerns that

activities which traditionally appeal to girls have been removed, therefore risking the possibility that fewer girls will opt to study Physical Education in the future.

Particular attention was given by five respondents to the removal of rounders from the list of activities. One national rounders membership organisation said, “At a time when there are grave concerns nationally about the drop off of girls participating in sport, it would be detrimental to remove rounders from GCSE PE. It is probably the most played and enjoyed sport for girls in secondary schools and provides a challenging sport for players disaffected by participation in other sports.”

Another respondent said, “At a time when everyone is endeavouring to address the ‘drop off’ in participation through secondary school, to remove a ‘favourite’ from the GCSE list would be foolish. Although, one could argue that the removal from GCSE does not prevent inclusion in PE lessons the reality is that with limits on time, resources etc, staff focus will be on sports/activities in examination syllabuses. The result will be a further reduction in female participation in sport.”

Claims about the popularity of rounders among girls are supported by evidence in the Young People in Sport Survey National Survey, 2002, which found that rounders was the most popular sport for girls. However, the survey also showed that it was the second most popular sports for boys. Therefore the impact on girls is not likely to be significantly disproportionate compared to the impact on boys.

A more recent 2010 survey by the Women’s Sport and Fitness Foundation, however, listed rounders as the tenth most popular sport among 11 – 15 year old girls for weekly participation after others including netball, swimming, football, basketball and cycling.[21]

The list of approved activities for GCSE and A level Physical Education was developed to reflect Ofqual’s principles that non-exam assessment should ensure sound assessment practice, be manageable and ensure a qualification is not easily distorted. The list is intended to ensure parity and comparable levels of rigour across activities.

There remain a number of other activities on the proposed activity list that are traditionally seen as appealing to girls, including netball, contemporary dance and swimming, however, DfE would not want to encourage gender stereotyping in perceptions of sport preferences. The 2002 Young People in Sport Survey also saw a significant increase in girls’ participation in football, which is traditionally seen as a boys sport, which is supported by its position as the fifth most popular sport among girls aged both 5 – 10 and 11 – 15 in the Women’s Sport and Fitness Foundation survey. The Football Association have claimed that women’s football could be the second most

[21] http://www.wsff.org.uk/system/1/assets/files/000/000/284/284/f3957f6e2/original/FACTSHEETyoung_womenand_girlsFINAL281010.pdf

popular team sport in Britain by 2018.[22] Whilst this is a goal driven by aspiration, that aspiration is founded on evidence of change.

We are confident that all the activities on the list are accessible to both boys and girls with the right teaching and encouragement.

The evidence of falling participation rates by girls over their school life is also well documented.[23] However, we would query the assumption that the removal of rounders from the list of activities would contribute to increasing this trend. A paper published by the Institute of Youth Sport shows that the decline in participation is influenced by multiple factors that slowly change over time, including social influences, such as the attitudes of friends and family, and the role of the environment.[24] Choice of activity is not noted as a factor.

As well as concerns about the potential impact on girls, we have been made aware of concerns that the list of activities has been perceived by some stakeholders as elitist due to the inclusion of activities such as outdoor skiing on snow and equestrian sport. The implication is that this discriminates against disadvantaged pupils who cannot afford to participate in these activities. However, none of the activities on the list are new. They are all options which are currently available. This equality impact assessment is looking specifically at the impact of changes to content. As these activities are not new, there is unlikely to be any disproportionate impact brought about by their inclusion. DfE believes that the full list of activities includes a broad range of activities to cater for schools and colleges with differing demographics.

Conclusion

The requirement for parity and comparable levels of rigour across activities is itself intended to ensure greater equality for students studying physical education in different contexts. Appropriate teacher support and encouragement should mean that no activity lacks accessibility or appeal to female students. DfE wishes to encourage attitudes towards physical activities that are not gender dependent.

In the course of consultation, no stakeholders raised concerns about the impact of the reduction in the list of activities on pupils with any other protected characteristics and we have found no evidence to suggest any likely disproportionate adverse impact. Data on sporting preferences among ethnic minority groups[25] leaves us confident that there are

[22] http://www.mancunianmatters.co.uk/content/210569011-girl-power-women%E2%80%99s-football-could-be-second-most-popular-team-sport-britain-2018

[23] e.g. Women's Sport and Fitness Foundation, Changing the Game for Girls (http://www.wsff.org.uk/system/1/assets/files/000/000/285/285/f4894dccf/original/Changing_The_Game_For_Girls_Final.pdf)

[24] Gorley, Sandford et al, 2011, Understanding psycho-social attitudes towards sport and activity in girls, Institute of Youth Sport

[25] Sport England, Sports Participation and Ethnicity in England, National survey 1999-2000

sufficient options on the list of approved activities to cater for the tastes of all ethnic minorities.

5.7 A level Modern Foreign Languages

Critical analysis in English

The proposals for A levels in modern foreign languages as published for consultation included a requirement to "appreciate, analyse and respond critically in writing in English to either a film or a literary work".

Impact

A number of respondents to the consultation raised concerns that the addition of a requirement for extended analysis in the English language will disproportionately impact on students from whom English is an additional language, such that they will be grappling with the challenges of two foreign languages rather than just one.

One teacher who responded to the consultation wrote, "With an emphasis on English, we would effectively drive away students who do not speak English at home, whereas they may well find the study of another language a more attractive prospect - after all, they have been learning English already, so another language is logical. Assessing in English would very much be detrimental."

Another respondent said, "The MFL curriculum will be less accessible to students with EAL because of the essay in English. It will be harder for them to manipulate 2 foreign languages at once and native English speakers will be at a clear advantage."

We have considered these concerns in the context of evidence about how speakers of English as an additional language fare in studies of a third language. A 2010 study showed that bilingual students already have an advantage over monolingual students in language studies.[26] The researchers set out to examine what benefits bilingualism might have in the process of learning a third language. They found that students who know two languages have an easier time gaining command of a third language than students who are fluent in only one language.

However, the potential impact is less clear where EAL students may not yet be fluent in English. Following further consideration and discussion with Ofqual, the panel decided to recommend removing the requirement for an essay in English from their proposed new content. Instead, students at A level will be expected to know, understand and respond critically in the target language to two works studied in the language of study, one of which must be a literary work.

[26] Abu-Rania and Sanitsky, 2010, Advantage of bilinguals over monolinguals in learning a third language, The Journal of the National Association for Bilingual Education.

Conclusion

The requirement to appreciate, analyse and respond critically in writing in English to either a film or a literary work was included in the proposed A level subject content in order to increase rigour and to ensure the qualification better prepares students for the requirements of further study or employment. Evidence suggests that bilingual students are actually at an advantage when learning a third language. However, concerns remained about EAL students who are not yet fluent in English. A decision was therefore taken to modify the proposed content to mitigate these concerns and the requirement to appreciate, analyse and respond critically in writing in English to either a film or literary work has now been removed.

Increased emphasis on literature, culture and society

The ALCAB panel recommended that more stimulating content is required for modern foreign languages A levels to re-engage students and schools. The proposed revised content requires students to engage critically with literary works and consider cultural and social concerns in the countries where the language of study is spoken.

Impact

Two concerns raised in the consultation about the increased focus on literature, culture and society related to the potential impact on boys under legislation to ensure no group is discriminated against on grounds of gender.

One respondent from a school expressed concerns specifically related to the move towards greater emphasis on literature, culture and society, saying, “Traditionally, more of my male students have studied a language alongside economics or sciences, whilst more female students also study English literature and the Humanities. I feel the new proposal would accentuate the gender gap a lot, when we already have many more girls than boys in MFL classrooms!”

The implication is that the proposed new subject content for A level modern foreign languages is more likely to appeal to students who choose to study humanities and literature than those studying sciences. It is further implied that that the former are disproportionately likely to be girls and the latter are disproportionately likely to be boys.

Patterns of A level subject choices confirm that more girls than boys take A level English literature, humanities and modern foreign languages, while more boys than girls take sciences (particularly physics, but not biology)[27]. However, these figures do not provide any information about the reasons behind students’ subject choices.

[27] Jin, Muriel and Sibieta, 2010, Subject and courses choices of ages 14 and 16 amongst young people in England, DfE Research Report.

A 2014 research paper by the Joint Council for Qualifications (JCQ)[28] found that students' motivations for choosing, or not choosing, to study a modern foreign language at A-level are wide-ranging. They include: perception of difficulty compared with other subjects; apathy towards language learning; the belief that people have a distinct aptitude for languages; perception that content is not sufficiently innovative to be motivating; not being made aware of the positive impact on earning potential or employability as a result of industry requirements for foreign language skills.

There is no evidence in the JCQ research that the decision to study a modern foreign language is in any way influenced by an overriding preference for any broad category of subjects, such as humanities. The JCQ evidence suggests that it is therefore unlikely that a shift in emphasis to increase the literary, social and cultural aspects of modern foreign language study will be a significant factor in causing reduced uptake among boys.

It is worth noting that one of the factors which is listed as relevant is the perception that the subject content of modern foreign languages is not sufficiently innovative to be motivating. The reformed content has been devised in part to address this particular issue, so rather than leading to a reduction in uptake, it may indeed help to improve uptake among both boys and girls.

A 2010 research paper commissioned by DfE and carried out by the Institute for Fiscal Studies[29] reports that in general, pupils' course and subject choices represent a series of decisions about the type of life they would like to lead in the future. The paper notes in particular the role played by information, advice and guidance. We therefore feel that any perceived lack of interest among boys can be partly addressed by good quality careers advice and guidance. This would help address the another factor noted by the JCQ in influencing uptake of modern foreign languages, namely awareness of the positive impact on earning potential or employability as a result of industry requirements for foreign language skills.

Certainly boys are at no obvious disadvantage in relation to their ability in modern foreign languages, with boys achieving more A* grades than girls in 2014.

We have found no evidence to suggest that this change will generate any disproportionate adverse impact on any other group protected under equalities legislation. A 2009 research paper found that the uptake of language A levels in 2007 was much higher for Chinese students and "other white" students than any other ethnic group.[30] Chinese students, however, had the lowest uptake of A level English of all ethnic groups, whilst pupils from an "other white" background had a relatively high uptake of English. This suggests that there is not necessarily any direct relationship between a

[28] JCQ, 2014, Modern Foreign Language A levels: Review of A* Grade and Take Up, Joint Council for Qualifications.
[29] Jin, Muriel and Sibieta, 2010, Subject and courses choices of ages 14 and 16 amongst young people in England, DfE Research Report
[30] Vidal Rodeiro, 2009, Uptake of GCSE and A level subjects in England by ethnic group 2007, Cambridge Assessment.

preference for languages and a preference for or against literature; at least not one which overrides other factors influencing A level choice. The paper also showed that pupils from Caribbean, Irish and mixed White and Black Caribbean backgrounds had the highest uptake of English, whilst all being at the lower end of language uptake. This suggests that, if anything, a greater focus on literature might help increase uptake of languages among these more poorly represented groups.

As discussed in relation to gender, there are likely to be a number of factors influencing subject preferences among different ethnic groups. Proficiency in English (i.e. fluency in a second language before taking a third) may be a factor and this is discussed in more detail below.

Conclusion

The existing research evidence about why students choose to study A level modern foreign languages does not suggest that the increased focus on literature, culture and society will lead to a reduction in the number of boys choosing to sit A levels in these subjects. Nor can we find any evidence to suggest there will be reduced uptake among any other group. On the contrary, the new proposals are in part designed to help make the subject more interesting and appealing to all students. The Government will continue to monitor any gender gap in uptake of modern foreign languages, but would encourage schools to make students aware of the benefits of studying modern foreign languages, particularly through the provision of high quality careers advice and guidance.

5.8 A level Ancient Languages

The ALCAB panel concluded that the current A level specifications in ancient and classical languages are essentially fit for purpose and are intellectually rigorous and challenging. The panel made recommendations to fine-tune the subject content and discourage memorisation of set texts in English translation. As there is currently no discrete content for ancient languages, new subject content has been developed, drawing on the existing A level specifications.

Impact

We only received two responses to the consultation questions about impact on equalities groups which related to A level ancient languages. The comments made in both of these cases were general comments on the subject content and did not note any specific impact on any groups protected under equalities legislation or any of the other groups considered in this impact assessment.

We have found no evidence in research literature or in our engagement with other stakeholders that there is likely to be any disproportional impact on members of any groups protected under equalities legislation. Because existing specifications were considered to be essentially fit for purpose, there is little significant change to content and we would therefore expect any resultant impact to be minimal too.

Conclusion

The lack of any comments about the impact of A level subject content for ancient languages on students with protected characteristics supports our view that there are no major concerns about the impact that the proposed content will have on students protected under equalities legislation. This is consistent with the fact that existing specifications were considered to be largely fit for purpose.

5.9 A level Mathematics

Increased emphasis on problem solving

The revised subject content aims to ensure that A level mathematics students are equipped with the skills and understanding needed for progression to university or employment. The requirements now prescribe 100 per cent of the content of A level mathematics, to ensure consistency across awarding organisations. This change is a direct response to requests from higher education and subject experts. The prescription also aims to support co-teachability of A level and AS mathematics.

The revised content emphasises problem solving, interpretation and testing to strengthen students' deep understanding of mathematical concepts and of the applications of these concepts. Students will be required to interpret at least one real, large data set. This addition aims to ensure that students develop the skills in interpreting and making inferences from data needed for progression to university and employment.

Impact

One respondent representing a national teaching union expressed a concern that the emphasis on problem solving could have a particular impact on members of minority ethnic and faith groups. The respondent said, "The setting of problems in context is always problematic, particularly when the context is completely unfamiliar to students because of cultural or economic differences."

Whilst this is a valid concern, the value of a qualification in mathematics for employment frequently depends on the application of mathematical theory to real world problems. A qualification which did not address this would not prepare students sufficiently well for future employment and would let down those industry sectors which depend on these skills. We believe it is possible for Awarding Organisations to design specifications and examinations in a way which ensures that problem solving is accessible to students of all ethnic and faith groups. Good quality teaching will also help to ensure understanding across all equalities groups.

Conclusion

The benefits of problem solving in maths are widely acknowledged in a broad range of research.[31] We have considered the concern that problems must always be framed in context and this may therefore be less accessible to students unfamiliar with the context because of reasons of ethnicity or faith. We do not feel this outweighs the benefits of

[31] e.g. (1) Cai, 2003, What research tells us about teaching mathematics through problem solving. In Lester, Jr. (Ed.), *Research and issues in teaching mathematics through problem solving,* Reston, VA: National Council of Teachers of Mathematics and (2) Lambdin, 2003, Benefits of teaching through problem solving. In Lester & Charles (Eds.), *Teaching mathematics through problem solving: Prekindergarten-grade*. Reston, VA: National Council of Teachers of Mathematics.

including problem solving in subject content. Rather it should help inform the development of specifications and problem scenarios that are ethnically sensitive and inclusive. Awarding Organisations are required to comply with equalities legislation to minimise bias, ensure accessibility of qualification and make assessment fit for purpose. They will take all of these factors into account in developing new specifications that are inclusive of pupils with all protected characteristics.

Compulsory mechanics

As outlined above, the requirements now prescribe 100 per cent of the content of A level mathematics, to ensure consistency across awarding organisations. This includes a requirement to study quantities and units in mechanics.

Impact

Concerns about the inclusion of mechanics in the A level mathematics content focus solely on the impact on female students as a protected group under equalities legislation. Four respondents to the consultation recorded concerns of this nature. Two were independent respondents, one represented a school and another wrote on behalf of a teacher membership organisation. Their shared concern is that fewer girls will choose to study A level mathematics because of the inclusion of mechanics.

One respondent wrote, “Girls in general dislike mechanics - see the evidence of current take-up of mechanics modules by gender. Being forced to study mechanics in A-level mathematics will discourage girls from taking up the subject.”

Another respondent from the higher education sector said, “Our concern with context stems from the detrimental effects on performance, recruitment and motivation of a narrow view of mathematics as serving only engineering and physical sciences. We see scope for further broadening of applications of pure mathematics within examination questions, and we don’t consider that this document commits to imposing such a requirement on the exam boards. The recent ASPIRES research confirms recommendations from the US that we should recruit girls into STEM subjects by emphasising the applications of mathematics in a wider range of careers including nursing, veterinary science, architecture, sociology and psychology.”

The mechanics requirement does not constitute a large proportion of the new subject content. It is one of eighteen areas of knowledge listed in the detailed content statement. It is also one of the smaller areas with few sub-categories. We do not feel that a component of this size is likely to significantly deter girls from studying the subject. Research suggests that the subject content itself is a less important factor in subject choice than other considerations.

The ASPIRES research cited by the consultation respondent focused on science subjects, but the UPMAP study focused specifically on understanding participation rates

in post-16 mathematics and physics.[32] Findings from the study showed that pupils are more likely to continue with mathematics and/or physics after the age of 16 if they recognise that studying one or more of these subjects post-16 stands them in good stead in terms of achieving a well-paid and interesting job. Perceived material gain was found to be one of most important factors predicting whether students will choose to study the subject post-16.

The UPMAP project further showed that young people are more likely to take mathematics post-16 if a significant adult has, over time, conveyed to them the worth of mathematics, along with a belief that the student can do well in the subject. It further showed that mathematics teachers, who convey messages about the importance of their subject for students' future careers, can be highly influential.

Together these facts suggest that any detrimental impact on girls' interest in studying A level mathematics could be mitigated by good quality careers advice and appropriate messaging from teachers.

Conclusion

Instead of seeing the inclusion of mechanics as discriminatory, DfE sees it as a mechanism by which to help positively encourage the involvement of both girls and boys in careers requiring mechanics. If girls do not encounter mechanics in their studies, they are less likely to consider further study or employment in this area. The intention is that making it compulsory will help to increase exposure to the subject among girls and will contribute to redressing some of the gender disparity in uptake of these careers. Any adverse impact on girls' interest in the subject can be mitigated by high quality careers advice and teacher encouragement.

We have no reason to believe that the compulsory inclusion of mechanics will impact negatively on students with any other protected characteristics.

Use of technology

The reformed subject content for A level Mathematics includes the requirement that the use of technology, in particular mathematical and statistical graphing tools and spreadsheets, must permeate the AS/A level mathematics specifications.

Impact

One independent respondent raised a concern about the potential impact of the requirement for use of technology on more disadvantaged students. As disadvantage can be disproportionately correlated with some ethnic groups, this may generate a disproportionate impact on students from those ethnic backgrounds. The respondent

[32] See the TISME paper, What influences participation in science and mathematics? A briefing paper from the Targeted Initiative on Science And Mathematics Education

said, “The Maths content says that computer programmes and software should be used throughout the course. I think that some parents cannot or will not afford the latest hardware and software for their children.”

DfE stresses that the requirement to use technology applies only to the classroom, not to the home environment. Instead of being discriminatory, the intention is to positively create an environment of equality where every A level student has access to relevant technology. If there was no requirement to include it in subject specifications, many more affluent students would continue to have access to technology at home, while less affluent students would not necessarily have the same opportunities to engage with it at school.

Pupil premium remains an additional resource to help support students who suffer any kind of adverse impact as a result of disadvantage. It can, for example, be used to purchase additional technology equipment.

We have considered whether the requirement to use technology might also impact on students with a disability. A 2012 paper by Burgstahler notes the barriers that people with a range of disabilities can face in engaging with technology, but provides a comprehensive guide to ways in which they can be overcome.[33] Whilst some of these options may be limited by financial resources, awarding organisations are, as previously outlined, required under equalities legislation to ensure that qualification specifications are unbiased, accessible to all and fit for purpose.

Section 96 of the 2010 Equality Act includes the duty for Awarding Organisations to make reasonable adjustments to ensure accessibility for disabled pupils to the extent specified by Ofqual. Ofqual allows reasonable adjustments to qualifications in the form of an exemption for a student from up to 40% of the marks available for a qualification. In light of Ofqual's determination, the JCQ’s “Adjustments for candidates with disabilities or learning difficulties” allow an exemption agreement to be reached by an awarding body, before the examination, for a candidate to miss a component or components amounting to no more than 40% of a GCSE or A level qualification.[34] This could potentially be applied where support to engage with technology is not available.

Conclusion

Whilst we recognise that there is disparity created by students differing socio-economic status, and hence their access to resources at home, the requirement to use technology in the classroom is intended to help mitigate this disparity and is presented as a positive impact for disadvantaged students.

[33] Burgstahler S, 2012, Working Together: People with Disabilities and Computer Technology, Washington University.
[34] http://www.jcq.org.uk/exams-office/access-arrangements-and-special-consideration/regulations-and-guidance/access-arrangements-and-reasonable-adjustments-2014-2015

We believe that sufficient support is available to help students with a range of disabilities engage with mathematical technology, but that reasonable adjustments in the form of an exemption can be applied for in exceptional cases where this is not possible.

5.10 A level Further Mathematics

The revised subject content aims to ensure that A level students are equipped with the skills and understanding needed for progression to university or employment. The requirements now prescribe 100 per cent of the content of A level mathematics, to ensure consistency across awarding organisations. This change is a direct response to requests from higher education and subject experts. The prescription also aims to support co-teachability of A level and AS further mathematics.

The revised content emphasises problem solving, interpretation and testing to strengthen students' deep understanding of mathematical concepts and of the applications of these concepts. Students will be required to interpret at least one real, large data set. This addition aims to ensure that students develop the skills in interpreting and making inferences from data needed for progression to university and employment.

Impact

Only three people who responded to the consultation questions on equalities commented specifically on the impact on students studying further mathematics.

One respondent representing a school commented to state that he sees no adverse impact on students with protected characteristics: "No issues here in Mathematics or Further Mathematics."

The other two respondents both commented on the impact of the decoupling of AS from A level. This, however, is outside the scope of this impact assessment as DfE has previously consulted on, and impact assessed, this issue.

Potential issues in relation to increased demand and the challenges related to context-specific problem solving have been discussed above.

Conclusion

No specific issues have been raised about the impact of new subject content for A level Further Mathematics on students with protected characteristics, other than what has already been covered in relation to A level Mathematics and the broader context of increased rigour across all new subject content. We therefore feel we have addressed the primary concerns in the preceding sections of this document.

5.11 A level Geography

Increased emphasis on problem solving

The revised content aims to indicate a clear progression from GCSE and provide students with the skills needed for progression to undergraduate study or employment. The revised content prescribes 60 per cent core content. This will provide higher education departments with a common base of assumed A level subject knowledge. The 40 per cent non-prescribed content allows awarding organisation to create distinctive specifications and introduce new material providing greater choice for schools.

The revised content addresses the concerns of subject experts in higher education and beyond, including the imbalance between physical and human geography. Core topics emphasise understanding of human and physical processes through the study of global systems and global governance; changing places; landscape systems; and water and carbon cycling. Fieldwork and specified geographical skills will be required as part of this core learning.

Impact

Only two respondents to the consultation answered the equalities questions with specific reference to A level Geography. One respondent, representing a higher education institute, simply stated that he could foresee no adverse impact on students with protected characteristics: “This depends on how the themes are taught, but there should be no issues in Geography.”

The second respondent, representing a sixth form college, raised a concern about the fieldwork requirements. Fieldwork is already required in A level Geography, so the inclusion of fieldwork itself does not represent a change to requirements. To this extent any impact on protected groups, such as those with a disability, will have been addressed in previous equality impact assessments. The specific change that is relevant here was noted by the respondent as the requirement for each student to have an individual research question: “There seems to be a disadvantage to large centres here – if each student is required to have an individual research question this is practically impossible for us. Currently we have 416 students within our department.”

The respondent’s concern does not relate directly to any groups protected by equalities legislation. Furthermore, it appears to derive from a misunderstanding of the proposed new requirements. Subject content for A level Geography does not specify that each individual must have a different research question. It simply specifies that the question must be defined by the student. It is feasible that different students may define the question in similar ways. The emphasis is on the student demonstrating the knowledge and skills required for defining and framing their research.

The respondent further suggested that “centres able to afford/facilitate the Field Studies Council will be at significant advantage. Large centres and those with impoverished cohorts will be unable to reap the benefits they give the students.” The question of potential disadvantage to less affluent students is one which has been covered a number of times in this impact assessment in relation to different subject areas. In this case, however, the concern raised does not relate specifically to the affluence of the students, but to that of the educational institution. This should not be a significant factor as all 16-19 education is funded using the same formula, which incorporates factors including student numbers, student retention, higher cost subjects, disadvantaged students and area costs. It is supplemented by additional funding for high needs students, bursaries and other financial support awarded to individual students. The funding specifically attached to disadvantaged students, should therefore help to mitigate any impact of the socio-economic makeup of the institution’s cohort. As mentioned in previous contexts, pupil premium can always be used to help support students suffering from financial disadvantage,

Conclusion

Our review of the relevant literature and discussions with stakeholders lead us to believe that there are no changes to A level geography content which are likely to generate a disproportionate impact on pupils with protected characteristics.

The very limited response to the consultation’s equalities questions in relation to A level geography supports this view by suggesting that the reform proposals are not highly contentious and thus not likely to have any significant impact on students with protected characteristics in the eyes of those education institutions, Awarding Organisations, sector advocacy groups, bodies representing equalities groups and independent individuals who responded to the consultation. There is no evidence from the concerns raised that any specific equalities group would be disproportionately impacted by the changes.

6. Summary

We believe that overall the proposals for reformed subject content examined in this equality impact assessment will have a positive impact on equality of opportunity by providing respected qualifications in which pupils, employers and further and higher education providers can have full confidence.

Equalities considerations have been taken into account before, during and after the process of developing new content. In examining the evidence and opinions we have collated, we believe the final changes proposed are objectively justified because they will have the effect of improving standards. Where concerns have been identified about the potentially negative impact of content, we have responded to the concerns as set out above.

Increasing demand across all GCSEs, including those which have traditionally had a significant practical component, is intended to help achieve parity in the value to students of all qualifications and in the perception among employers and further/higher education institutions of the qualifications' worth. We are confident that where this presents challenges to students with protected characteristics, there are a number of appropriate and available means of mitigation.

These include the provision of good quality teaching and support to students experiencing difficulties, such as those with special educational needs or English as an additional language. The quality of SEN teaching is central to ensuring pupils with SEN are given the best possible opportunities to achieve results in any of the GCSEs and A levels considered here. A summary of DfE's programmes to support good teaching for pupils with SEN is set out at Annex A.

Means of mitigation also include the Pupil Premium, which is additional funding given to publicly funded schools in England to raise the attainment of disadvantaged pupils and close the gap between them and their peers. This funding is awarded per eligible pupil. It is not ring-fenced and can be used to help support pupils in whatever way their disadvantage impacts on their ability to access, engage with, or succeed in programmes of study.

Further means of mitigation are already embedded in legislation or guidance, such as the reasonable adjustments in the form of an exemption, referred to in the section on music above, which ensures no disproportionate impact on those unable to practically perform on an instrument.

We also believe that appropriate careers guidance and support can be used to help foster engagement among students with protected characteristics with subjects they may not perceive as relevant to them. We discussed this above in relation to girls and mathematics.

DfE believes that every subject should be accessible and appealing to all students regardless of ethnicity, gender, faith, disability, sexual orientation or maternity. Rather than accede to perceived preferences among different groups, DfE strives for a climate in which no subject is, or is seen to be, better suited to students with any specific characteristics. Equality is as much about equality of aspiration as it is about equality of opportunity. Where practical impediments present obstacles to any particular group's participation or success, every effort has been made to ensure that mitigating action can be, or has been, taken.

As well as considering each subject individually, we have also given consideration to any potential cumulative impact of the changes across subjects. As we are confident that any possible adverse impacts identified in relation to individual subjects have appropriate means of mitigation, we have no reason to believe there will be any additional impact at the cumulative level.

Annex A: DfE programmes to support effective teaching for pupils with SEN

The quality of teaching is central to ensuring that pupils with SEN are given the best possible opportunity to achieve good results in their GCSE and A level studies. Following recommendations from the Rose review, 3,200 teachers obtained specialist qualifications in dyslexia approved by the British Dyslexia Association.

The government's Schools Direct programme is helping to improve the skills of new teachers in supporting SEN; and the National College for Teaching and Leadership has developed specialist resources for initial teacher training and new advanced level online modules on areas including dyslexia, autism and speech and language needs, to enhance teachers' knowledge, understanding and skills.

DfE is also providing £5.5 million over two years through contracts with the Voluntary and Community Sector to provide free information, advice and training on key aspects of SEN. This includes:

- NASEN (the National Association of SEN) is being funded to provide an SEN Gateway – a one stop shop for schools and teachers looking for useful training resources and materials.

- The Dyslexia SpLD Trust is providing a free online professional development tool for teachers, allowing them to assess their knowledge of dyslexia, find and access suitable training. The Trust has also produced a web-based catalogue of the best-evidenced approaches to supporting dyslexic pupils.

- Other organisations such as the Autism Trust, Communication Trust and National Sensory Impairment Partnership are producing tools and information for schools on the specialist areas that they represent.

Annex B: Equalities groups that we have engaged with in the process of GCSE reform or who have responded to a reform consultation

- Dyslexia-SpLD Trust, the membership of which consists of:
- British Dyslexia Association (BDA)
- Dyslexia Action
- Helen Arkell Dyslexia Centre
- Professional Association of Teachers of Students with Specific Learning Difficulties (Patoss)
- Springboard for Children
- Xtraordinary people
- Driver Youth Trust
- English Federation of Disability Sport
- Board of Deputies of British Jews
- National Children's Bureau & the Council for Disabled Children
- British Association of Teachers of the Deaf (BATOD)
- National Deaf Children’s Society (NDCS)
- Royal College of Speech and Language Therapists (RCSLT)
- Signature
- Association of Christian Teachers
- National Association of Orthodox Jewish Schools (NAJOS)

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