Department for Education

Subject content of reformed GCSEs in languages, sciences, history and geography: equality analysis

April 2014

Contents

1. Introduction

This document assesses the impact of new GCSE content in modern foreign and ancient languages, sciences, history and geography by reference to the protected characteristics of pupils. 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 age, disability, gender, pregnancy and maternity, race, religion or belief, sexual orientation and gender reassignment. 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, although not as a proxy for groups with protected characteristics. Some of the evidence that has informed this equality analysis, for example that which relates to low attaining pupils, does not relate specifically either to groups covered by the Equality Act or to the defined groups of pupils identified above (e.g. SEN, EAL, FSM). However, we know that some of the groups considered in this analysis are disproportionately represented among low attaining pupils.

We have not identified any potential for a negative impact on students because of their age, religion or belief, pregnancy or maternity or sexual orientation or as a result of gender reassignment. Nor has any adverse impact on these groups been communicated to us either through our meetings with representative groups or by respondents to our consultation.

2. Engagement and involvement

The public consultation opened on 11 June 2013 and closed on 20 August 2013. We received 686 responses from a range of stakeholders, including schools, equalities groups and awarding organisations.

3. Description of the policy

Following a public consultation in 2012 on reforming key stage 4 qualifications, the Secretary of State wrote to Ofqual, setting out his intention to reform GCSEs so that they set expectations of rigour and challenge that match and exceed those in the highest performing jurisdictions. 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 government has also completed a further public consultation on the content that should be assessed as part of GCSEs in the subjects which make up the English Baccalaureate (English, mathematics, modern foreign and ancient languages, sciences, history and geography). We published final content for reformed GCSEs in English Language, English Literature and Mathematics in November 2013 and reformed GCSEs in these subjects will be introduced for first teaching from September 2015. GCSEs in the remaining English Baccalaureate subjects will be introduced for first teaching from September 2016.

These 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 modern and ancient languages, sciences, history and geography GCSEs has been informed by:

i. meetings with employers, FE stakeholders, subject associations and awarding organisations.

ii. the range of documents set out at Annex B.

iii. responses to our GCSE subject content consultation, including from organisations representing the interests of groups with a protected characteristic (Annex C).

5. Evidence review

DfE asked the following question in its GCSE subject content consultation:

Do any of the proposals have potential to have a disproportionate impact, positive or negative, on specific pupil groups, in particular the 'protected characteristic' groups? If they have potential for an adverse impact, how can this be reduced?

The following summary of evidence draws on responses to the public consultation on the GCSE content, and also refers to views expressed by stakeholders in face-to-face meetings in developing subject content. The subject content consultation asked for views on the equality implications of the draft content and assessment objectives. 436 responded to this question (from 686 respondents to the overall consultation). 273 stated that it would have a negative impact on those students with one or more protected characteristics. 84 were not sure if it would have an impact. 70 said it would have no impact and 9 said it would have a positive impact. However, of the 273 who thought there would be a negative impact, the majority (165) made no further comment or explicit reference to which groups or how it would negatively impact.

5.1 Changes to content

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. 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.

Impact

51 respondents raised concerns that reformed GCSEs would impact on all but the students of higher ability. Specific references were made to EAL/ESL students, less able (lower ability) groups, dyslexic students, those with SEN, those with disabilities and FSM students. Respondents did not always draw the distinction on groups such as those with dyslexia, SEN and/or disabilities. We note that while the impact is very likely to be different on different individual students, these may be mitigated through existing access arrangements, and overall the impact is positive.

DfE also considered the evidence it had gathered during its earlier 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.

We published a discussion of the evidence we had gathered on the impact of raising expectations in the equalities analysis which followed our consultation.[1] A review of research literature, supplemented by discussions with schools and colleges, indicated that a culture of high expectations is one of several consistent factors essential to high student attainment and good progress. Whilst effective for all students, our review of research indicates 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
- 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[2]. All pupils taking reformed GCSEs in these subjects will have studied a curriculum which draws on those of the highest performing jurisdictions and will be provided with an accurate assessment of their performance that has real value for their future progression to further education and/or employment.

Conclusion

A 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,

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

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

and particularly in responding to low student attainment. We conclude that the proposed content for reformed GCSEs will impact on all students both with and without protected characteristics and including higher ability students.

We consider that overall these reforms will promote greater equality of opportunity.

All students, including those with protected characteristics, will benefit from more demanding and fulfilling GCSE study courses which better equip them to progress towards further study and work opportunities. 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 Languages

Content proposals in languages

In modern languages, we proposed that the subject content will require students to understand and respond to different types of language, both spoken and written, and to communicate and interact effectively, both in speech and writing, across a range of familiar and fresh contexts, appropriate to their age, interests and maturity levels. The assessment objectives for the four skills of listening, reading, speaking and writing will be weighted equally.

In ancient languages, the subject content will require students to understand the cultural legacy of the ancient world through its language and literature; read, understand and interpret the ancient language; and develop knowledge and understanding of the ideas, values, culture and practices of the classical/biblical world through reading and responding to literature and other primary sources. The assessment objectives for linguistic and cultural competence will be weighted equally.

Impact

In terms of the scope of study, twelve respondents commented specifically on languages and how the proposals might have the potential to impact on specific pupil groups. Three respondents were concerned that the languages GCSE was too academic and there should be alternative qualifications available. Three were concerned that ancient languages were elitist with two specifically mentioning removal of manipulation of language. One thought that modern languages were too elitist and said that as a result numbers were falling. Another respondent thought that GCSE language qualifications should be broadened to include a wide variety of languages suitable for all EAL students e.g. Somali. One respondent said that MFL GCSE questions being written in English would disadvantage EAL students.

Taking these points in turn:

We do not believe the proposals for ancient languages will make the subject more elitist. We want to raise expectations across all reformed GCSEs so that they match those of the highest performing countries. This will affect all pupils taking the reformed GCSEs and will not impact disproportionately on groups with protected characteristics. All pupils will benefit from studying courses which are drawn from the best international curricula.

We want as many pupils as possible to study reformed GCSEs in languages, given that these are qualifications which we know are valued by employers and further and higher education. The numbers of pupils taking modern languages is increasing dramatically following the introduction of the English Baccalaureate measure which acknowledges

schools' achievements on behalf of their pupils in languages and other core academic subjects.

Entry numbers to modern languages, while falling for a number of years, increased dramatically in 2013 due to the EBacc. Almost half of the key stage 4 cohort in England entered for a language this year - 48%, up from 40% in 2013. This is the highest proportion of pupils taking languages for 7 years:

- French is up 19% from last year
- German is up 10% from last year
- Spanish is up 31% from last year

Turning to the coverage of languages - the content criteria are designed to be used across the full range of languages for which a GCSE might be developed, as they are not culture-specific, so there is scope for the development of a GCSE in any language where there is market demand and the specification meets accreditation requirements.

Finally, it is educationally justified to require some questions in language GCSEs to be written in English. The new content requires more questions to be set in the assessed language. In some cases questions will not be set in the assessed language (for example where pupils are being assessed on the quality of their response in the assessed language, not on comprehension of the assessed language in the question itself); in those instances it is self-evident that questions should be in English, given that the examinations are being accredited for teaching in English schools. The use of any language other than English in these circumstances would have a greater adverse impact on particular groups of pupils.

The assessment objectives for modern languages have been clarified, from a current range of 20-30% each, to 25% each. This has the potential to positively and adversely impact pupils with some disabilities, depending on whether specifications have increased or decreased the weighting of assessment relating to their disability. It is clearly justified to clarify weightings for listening, reading, speaking and writing and to continue to assign them equal importance. We received one comment on the assessment objectives. This was from one of the major associations representing the deaf/speech communities, which commented that the proposed balance of the assessment objectives was correct. The organisation stated that in, in order to access Assessment Objective 1 (listening), deaf students should have visual support though a live speaker.

There were some further comments on the support which pupils are given in GCSE examinations: a respondent suggested that if dyslexic pupils are to be given help, then extra time in the listening exercise was the least useful thing (he suggested individual MP3 players as a solution).

We have not identified any evidence or been presented with evidence that shows a negative impact on students because of age, gender, religion or belief, pregnancy or

maternity or sexual orientation or as a result of gender reassignment.

Conclusion

The proposed changes to content are justified and necessary to the reformed GCSE to require students to understand and respond to different types of language, both spoken and written, and to communicate and interact effectively, both in speech and writing, across a range of familiar and fresh contexts, appropriate to their age, interests and maturity levels.

Ofqual will be consulting on the key characteristics of languages GCSEs shortly. The regulator monitors existing requirements on Awarding Organisations to provide access arrangements and reasonable adjustments. We will pass the evidence we have gathered to Ofqual, so that it can assess whether these arrangements continue to be suitable for candidates taking reformed languages GCSEs.

5.3 Sciences

Content proposals for sciences

The science suite includes subject content and assessment objectives for separate GCSEs in biology, chemistry and physics as well as a combined science double award. The combined science double award contains an appropriate spread of essential subject content across biology, chemistry and physics, and is consistent with proposed key stage 4 national curriculum requirements. It is intended to support progression to A levels in any of the three sciences. The sciences all contain explicit requirements for application of mathematical understanding and, in physics, new expectations for the recall and application of key formulae.

Impact

Nine respondents commented specifically on sciences and how the proposals might have the potential to impact on specific pupil groups.

Three respondents specifically mentioned that the level of demand of language used in the biology specification could be a barrier to students with SEN or, those with English as an additional language. Two respondents thought that physics content would discourage female participation and one thought that the increase in mathematical emphasis and the reduction in science in the real world opportunities will hinder female students' enthusiasm for the subject. One respondent thought that there was a lack of appropriate differentiation between combined science and the triple science criteria and that this might prevent SEN pupils from accessing combined science because it had too much content.

The DfE's literature review found that there is little evidence on the impact of science examination content on particular pupil groups. Some of the evidence found indicates that EAL pupils perform less well in science at key stage 1 and key stage 2 than their non-EAL peers, but tend to perform only marginally less well in mathematics at the same levels. This differential attainment may be explained by difficulties experienced by EAL pupils in understanding the specific academic English vocabulary that is used in science instruction.

Feedback from teachers during consultation suggested that young people were not fully equipped to be able to explain scientific concepts and processes accurately. We have therefore raised the level of demand of scientific language as it is vital that students are able to communicate scientifically and build up a specialist vocabulary. Students should be able to describe scientific processes and key characteristics in common language as well as being familiar with, and use, technical terminology accurately and precisely.

Where this might impact on some students with EAL or SEN, the central importance of scientific language justifies the increased level of demand. The terminology used in science has been strengthened through all the key stages ensuring that all students should be better prepared for science GCSE and the appropriate terminology.

Raising the participation of female students, in particular sciences post-16, is a priority for the Department and we are looking at how we widen participation of girls and students from disadvantaged backgrounds. We have in place a range of programmes to support this agenda such as The Stimulating Physics Network and The Triple Science Support Programme. Since the consultation, the Department has worked with subject experts and other stakeholders to ensure that the real world applications in the content criteria are gender neutral. However, the content criteria focus on the key science underpinning understanding. The awarding organisations will be responsible for developing their own specifications and examples of real world applications and context to maximise students' engagement. However, we will be clear in the content that Awarding Organisations are required to ensure gender neutral language and examples are used. In addition to ensuring more gender neutral language we have worked on making science concepts in the content more fulfilling for all students including, for example, cutting-edge technology such as nano-particles and use of gene technology. These changes will make the new content more fulfilling and exciting for all students.

We have strengthened the mathematics requirements for science as HE stakeholders were clear that science students must have stronger mathematical skills. Mathematical skills and requirements have been strengthened throughout all the key stages so students will be better prepared for this content in the future. We do not agree that increased emphasis on mathematical skills will adversely affect girls. In 2013, 73% of pupils (73% female and 72% male) achieved at least a C grade in mathematics. Female students outperformed male students by a small margin at the level of mathematical ability that these changes require.

The Department has continued to work with subject experts and other stakeholders to develop the content prior to publication including changes to ensure that the combined award is appropriately challenging. We have reviewed the combined award overall to reduce the amount of content whilst ensuring the demand is analogous with triple science in order that it remains an appropriate route to A Level. Whilst expectations will be raised for all pupils, the changes will not have a disproportionate impact on pupils with protected characteristics.

We have not identified any evidence or been presented with evidence that shows a negative impact on students because of religion or belief, pregnancy or maternity or sexual orientation or as a result of gender reassignment.

Conclusion

We conclude that the proposed changes are justified to ensure that students are taught the essential core knowledge in the sciences and the appropriate increased emphasis on recall and understanding of essential knowledge such as formulae in physics. The proposed content is consistent with proposed key stage 4 national curriculum requirements and supports progression to A levels.

5.4 History

Content proposals for history

The content of the history GCSE is intended to support students in learning more about the history of Britain and the wider world. It should inspire students to deepen their historical understanding, think critically, weigh evidence, sift arguments, make informed decisions, and develop perspective and judgement.

Impact

Eight respondents directly commented that the proposed changes could have an impact on those with protected characteristics. Five of the respondents were concerned that the history content was not inclusive enough and risked alienating some groups (specific mention was made of race, disability, non-British). One respondent thought that it would only be made available to the most able. One respondent was concerned that those with dyslexia would be disadvantaged by the text based work of the proposed historical investigation.

The DfE review of evidence showed some limited evidence that pupils in schools visited for a report studied a considerable amount of British history and knew a great deal about the particular topics covered. However, the large majority of the time was spent on English history rather than wider British history. It also showed patterns of entry for GCSE history varied considerably between different types of school: only 30% of students in maintained schools took the subject in 2010 compared with 48% in independent schools.

We think that it is absolutely justified to require that GCSE history courses of study taught in England contain substantial and coherent elements of British history and/or the history of England, Scotland, Wales or Ireland. We have therefore raised the requirements for coverage in this area from 25% to 40%. We do not agree that groups of pupils will be alienated given that that content is directly relevant to the country they live in. It is also the case that the content requires students to spend a substantial part of the course studying history of the wider world.

The subject content for history aims to develop students' interest in the subject, as well as retaining a strong emphasis on the development of broad historical understanding.

The new content on history of the wider world will provide opportunities to engage students from a range of different backgrounds in broader history and the history of more than one country.

Our policy in encouraging all pupils to enter the core EBacc subjects far from turning pupils away from history, has encouraged more pupils to enter this GCSE. For example, following the introduction of the EBacc in 2010 we have seen entries to history begin to rise substantially with history entrants rising 19% in 2013 compared to the year before and we expect this trend to continue. In 2013, the percentage of pupils in state funded schools taking GCSE history rose to 38%.

A greater weighting on the selection, recall and application of historical knowledge and understanding is necessary to allow students to develop the skills students need for further study. It is possible that some pupils with disabilities may struggle more than their peers with recall. However, these skills are very important to the study of history and students should be required to demonstrate them as part of the assessment. Access arrangements such as additional time will provide mitigation in many cases. Whilst ensuring that the integrity of the qualification improves, we are committed to supporting schools with training and resources to help them identify barriers to learning, and to offer appropriate support (see a summary of this at Annex A).

We have not identified any evidence or been presented with evidence that shows a negative impact on students because of age, gender, religion or belief, pregnancy or maternity or sexual orientation or as a result of gender reassignment.

Conclusion

We conclude that the content proposals are justified. Students will no longer be able to follow GCSE courses that are narrowly focused on one period of history or a narrow focus on one historical theme.

We believe that the content supports students in learning more about the history of Britain and the wider world. It should inspire students to deepen their historical understanding, think critically, weigh evidence, sift arguments, make informed decisions, and develop perspective and judgement.

5.4 Geography

Content proposals for geography

The revised subject content and assessment objectives for geography focus on essential subject knowledge in: human and physical geography (including people and environment); location and place knowledge; and geographical skills and fieldwork. Students will need to apply their geographical knowledge, skills and understanding to real world contexts, including fieldwork, and to contemporary situations and issues; and develop well-evidenced geographical argument drawing on their deeper knowledge and understanding of geographical issues.

Students must carry out fieldwork studies in at least two contrasting environments beyond the classroom and school grounds.

Impact

The DfE evidence review identified no evidence relating to geography or proposed changes to the content that would impact on those with protected characteristics. Six respondents directly commented on geography proposals that the proposed changes would impact on those disabled students with disabilities or those with SEN (three of six respondents) due to mobility/access problems and those from disadvantaged/less affluent backgrounds (four of six respondents) due to lack of adequate funding to participate in field work.

Fieldwork is an essential aspect of geography which ensures that students are given the opportunity to consolidate and extend their achievement by relating learning to real experiences of the world. One leading geographical society recognises that for pupils with mobility or access requirements that geographical fieldwork may present some challenges. However, the proposals do not provide any significantly new requirements for fieldwork, other than the identification that fieldwork should take place in at least two contrasting environments. The society believes that teachers can plan engaging and accessible fieldwork that meets the needs of their pupils within this context.

We are reassured that there are a range of mitigation strategies that can be and are currently employed by schools with some careful planning. These include: raising money to subsidise school trips to reduce the cost of the parental donation; to allow parents to pay by instalments; waiving costs as and when required and making more use of local/day opportunities.

One respondent suggested that the Department publishes an evidence note for schools, demonstrating the benefits and opportunities for pupil premium funding to be directed by schools towards providing learning outside the classroom in the natural environment.

Whilst it is for individual schools to decide what is the best use of pupil premium, schools are encouraged to make use of the evidence and resources such as the Sutton Trust/Education Endowment Foundation *Teaching and Learning Toolkit* when making decisions about how to make the best use of their pupil premium allocation. The toolkit includes a section on outdoor-adventure learning.

We have not identified any evidence or been presented with evidence that shows a negative impact on students because of age, gender, religion or belief, pregnancy or maternity or sexual orientation or as a result of gender reassignment.

Conclusion

We consider that requiring students to undertake fieldwork assignments is justified as the content will allow students to apply their geographical knowledge, skills and understanding to real world contexts, including fieldwork, and to contemporary situations and issues; and develop well-evidenced geographical argument drawing on their deeper knowledge and understanding of geographical issues.

6. Summary

We believe that overall the GCSE content will have a positive impact on equality of opportunity by providing respected qualifications in which pupils, employers and further and higher education institutions can have full confidence.

Looking at the evidence cited above, we believe these changes to be objectively justified as they will have the effect of improving standards. Where respondents have raised concerns about the potentially negative impact of content we have responded to the concerns as set out above.

In the sciences where this might impact on some students with EAL or SEN the central importance of scientific language justifies the increased level of demand and rigour of the qualifications. There is also a positive impact for all students (and specifically female students) where we have engaged more gender neutral language and examples as we believe these changes will be engaging to a range of students.

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. GCSEs in these core academic subjects are the building blocks of our education system. Improving the standards of these qualifications is ultimately beneficial to all students providing the best possible opportunities for progression into further and higher education.

The new GCSE content is being delivered in a wider context, which will raise the achievement of pupils with SEN. Many policies, for example the introduction of the Pupil Premium and the expansion of the academies programme have a particular focus on those pupils left behind currently. The quality of SEN teaching is central to ensuring that pupils with SEN are given the best possible opportunity to develop key English and mathematics knowledge, understanding and skills. A summary of DfE's programmes to support good teaching for pupils with SEN is set out below at Annex A.

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 develop key English and mathematics knowledge, understanding and skills. DfE is also ensuring that the quality of teaching is improved. 600 teachers have achieved or are working towards a qualification related to SEN through the National Scholarships Fund and a further 500 have applied for the current funding round. More than 500 support staff have trained or applied for funding to increase their skills in SEN. Following recommendations from the Rose review, 3,200 teachers obtained specialist qualifications in dyslexia approved by the British Dyslexia Association.

The quality of initial teacher training in SEN is increasing. Almost two thirds of newly qualified secondary school teachers in 2012 rated this aspect of their training as good or very good, compared to less than half of those surveyed in 2008. A DfE survey of 12,000 Newly Qualified Teachers in 2012 found that just 7% of them rated their training in SEN as poor. 59% of primary and 66% of secondary teachers rated their training as “good” or “very good” in helping them to teach pupils with SEN. This compares to as few as 45% in 2008.

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: Documents considered as part of the equality analysis

Becta (2010) *The Impact of Technology on Children's Attainment in English: A Review of the Literature.*

CBI (2011) *Building for growth: business priorities for education and skills. Education and skills survey* 2011.

CBI (2012) *Learning to Grow: What employers need from education and skills*. Education and skills survey 2012.

Centre for the Use of Research and Evidence in Education (CUREE) (2008) *Building the Evidence Base, Strand 1: Student Data, Final Report.* Qualifications and Curriculum Authority (QCA).

Clark, C. and Akerman, R. (2006) *Social Inclusion and Reading: An Exploration*. London: National Literacy Trust.

Daly, C. (2003) *Literature search on improving boys' writing*. Published by Ofsted.

Department for Children, Schools and Families (2009) *Deprivation in education: The evidence on pupils in England, Foundation Stage to Key Stage Four*.

Department for Children, Schools and Families (2009a) *Key Stage 1 Attainment by Pupil Characteristics, in England 2008/09* SFR 33/2009.

Department for Children, Schools and Families (2009b) *Key Stage 2 Attainment by Pupil Characteristics, in England 2008/09* SFR 31/2009.

DfE (2012): *GCSE and Equivalent Results in England 2011/12 (Provisional).*

DfE (2011). *Review of the National Curriculum in England: what can we learn from the English, mathematics and science curricula of high-performing jurisdictions?* London: Department for Education. RR178.

DfE (2007): *Communication, Literacy and Skills for Foundation Stage Profile Attainment Data.*

ERIC (2003) *Problem-based learning in mathematics*. ERIC Digest 482725.

Estyn (2008) *Closing the gap between boys' and girls' attainment in schools*.

Hart, K.M. (Ed) (1981), *Children's Understanding of Mathematics*: 11-16, John Murray.

Kotler, A., Wegerif, R. and LeVoi, M. (2001) '*Oracy and the educational achievement of pupils with English as an additional language: the impact of bringing 'Talking Partners' into Bradford schools*'. International Journal of Bilingual Education and Bilingualism, Vol 4, No 6, 2001.

Lenhart, A., Arafeh, S., Smith, A and Macgill, A. (2008) *Writing, technology and teens.* Pew Internet and American Life Project, Washington D.C.

Mason, L., Harris, K. and Graham, S. (2011) *Self-regulated strategy development for students with writing difficulties. Theory into practice*, Vol 50: 20-27.

Mullis, I.V.S. et al (2000) *Gender differences in achievement: IEA's Third International Mathematics and Science Study (TIMSS).* Chestnut Hill, Massachusetts: TIMSS & PIRLS International Study Centre, Boston College.

Myhill, D. and Fisher, R. (2005) *Informing practice in English: a review of recent research in literacy and the teaching of English.* Ofsted (reference no: HMI 2565).

Nunes, T., Bryant, P. and Watson, A. (2010) *Key understandings in mathematics learning.* Oxford University. Funded by Nuffield Foundation.

OECD (Organisation for Economic Cooperation and Development) (2001) *Knowledge and skills for life: first results from the OECD Programme for International Student Assessment (PISA) 2000.* Paris: OECD.

OECD (2004) *Learning for Tomorrow's World: First Results from PISA 2003.* Paris: OECD.

Watson, A., Jones, K. and Pratt, D. (2013), *Key Ideas in Teaching Mathematics: Research Based Guidance for ages 9-19*, OUP.

Younger, M. and Warrington, M. with Gray, J., Ruddock, J., McLellan, R., Bearne, E., Kershner, R. and Bricheno, P. (2005) *Raising boys' achievement*. DfES RR636.

Annex C: Respondents to GCSE consultation representing the interests of groups with a protected characteristic

- 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
- 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
- Board of Deputies of British Jews
- National Association of Orthodox Jewish Schools (NAJOS)

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