



House of Commons  
Education Committee

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# The administration of examinations for 15–19 year olds in England

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First Report of Session 2012–13

*Volume III*

*Additional written evidence*

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## The Education Committee

The Education Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Department for Education and its associated public bodies.

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Neil Carmichael MP (*Conservative, Stroud*)

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Nic Dakin MP (*Labour, Scunthorpe*) and Tessa Munt MP (*Liberal Democrat, Wells*) were also members of the Committee during the inquiry.

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### Committee staff

The current staff of the Committee are Dr Lynn Gardner (Clerk), Penny Crouzet (Committee Specialist), Benjamin Nicholls (Committee Specialist), Ameet Chudasama (Senior Committee Assistant), Caroline McElwee (Committee Assistant), and Paul Hampson (Committee Support Assistant)

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Supplementary evidence from Oxford University Press

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# Written evidence

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## Written evidence submitted by National Union of Teachers

### INTRODUCTION

1. The National Union of Teachers welcomes the opportunity to respond to the Education Committee Inquiry into the Administration of Examinations for 15–19 Year Olds in England.

*The arguments for and against having a range of awarding bodies for academic and applied qualifications (including A levels, GCSEs, Diplomas, BTECs and OCR Nationals) and the merits of alternative arrangements, such as having one national body, or examination boards franchised to offer qualifications in particular subjects or fields.*

2. The NUT believes that schools and colleges should have a choice of awarding body, in order to best meet the particular needs of their students.

3. Although it could be argued that having fewer awarding bodies could reduce administration and workload, it is important that schools when selecting an awarding body be given the choice of selection based on the quality of the specifications offered. Having only one awarding body will reduce this choice to the detriment of teaching and learning in a school.

4. Having more than one awarding body also limits the risk of a single system's failure affecting all candidates. Only this summer, there were a number of errors in a small number of GCSE, AS and A level question papers. This problem would have been exacerbated further under the auspices of one awarding body.

*How to ensure accuracy in setting papers, marking scripts and awarding grades*

5. The NUT believes that the function of the examination process is not primarily to rank students so that employers and universities have some sense of their abilities. Exam specifications should, in the first instance, be interesting and qualifications taken should be relevant to young people's lives and support them in their development as lifelong learners.

6. Examinations should not be developed so that they act as obstacles or barriers to learning. For example, making examinations more "difficult" will not necessarily contribute to developing independent learning or critical thinking.

7. Students should, of course, be challenged when taking examinations, but making examinations more "difficult" in the hope that this will improve educational standards is short-sighted and will not produce qualifications that are fit for purpose for a variety of learners.

8. The NUT believes that, because of accountability measures such as the pressure of league tables within which examination results are used to compare schools against other schools and local authorities against other local authorities, there is too much emphasis on meeting examination targets and performing well in league tables. This pressure makes the accuracy of the award process even more crucial, as it affects not only individual students but also, potentially, entire institutions.

9. The quality of examination marking must be monitored closely and errors addressed swiftly. It is important that public confidence in the examination system is maintained, especially for students and their families. Assurances must be given to candidates that errors in examinations will be dealt with carefully and sensitively and that it will be made known that procedures are in place to ensure candidates are not unfairly advantaged or disadvantaged in circumstances where errors do occur in examination papers.

10. The awarding of grades can only be an approximate indication of student achievement. Any examination success relies not just on the quality of the specification or the quality of teaching and learning, but also on factors beyond anyone's control, such as how one candidate can perform differently on different days and the use of judgements by those marking public examinations.

11. The NUT believes, therefore, that grade comparisons will always be approximate and that examination results should be treated as only one piece of evidence when ascertaining student achievement or how students might achieve in the future. The examinations process cannot be based on an "exact science" approach.

12. The NUT believes that Ofqual, as the Qualifications Regulator, must rule on specific examination standards to counter public perceptions on the "dumbing down" of examinations. This ruling must of course appear in the public domain.

13. Errors that occur in the examination process must be dealt with by the Qualifications Regulator effectively and it must be seen that checks are carried out to ascertain what has gone wrong and to assure all parties concerned that no further errors will occur.

14. It is right that Ofqual maintains a consistent level of attainment between regulated qualifications. It is crucial that, over time, examination standards remain consistent, particularly with the introduction of new types of qualifications.

15. It is also right that Ofqual checks thoroughly that examiners and assessors are appropriately trained to apply marking schemes correctly. This will help address the serious concerns of teachers in regard to the mismatching of tests and examinations. Examiners and assessors who mark examination papers must be properly trained and their approaches standardised.

16. When things go wrong in the testing and examination system, there needs to be a quick and clear response by the Qualifications Regulator to investigate what has happened in order that public confidence in the examination system is not undermined.

*The commercial activities of awarding bodies, including examination fees and text books, and their impact on schools and pupils*

17. England's examination system is the most expensive and elaborate in the world. The cost of testing pupils in any school year can be up to £610 million a year. The examination bill includes £240 million for staff time in administering examinations in schools. School budgets are likely to be squeezed after 2011, with exam fees amounting to a huge proportion of a school's overheads, Ofqual's power to cap fees in principle is to be welcomed, but this must be balanced against the need for innovation within the awarding process.

18. Teachers are increasingly concerned about the extent to which school budgets are being taken up by the cost of qualifications. A report from Ofqual, as the Qualifications Regulator, showed that examination fees for a number of widely used examinations had increased above inflation over a number of years.

19. The NUT believes that best value for money should be obtained for schools and colleges in the delivery and development of qualifications. As Ofqual reviews examination fees so that an efficient market operates, it is important that, in this area, robust analysis and research is undertaken by the regulator.

20. With the introduction of new qualifications which add to the fragmentation of a coherent 14–19 examination system, schools and colleges will face difficult decisions in terms of having the resources in place to match the right qualification to the individual learner. The NUT believes that with the introduction of new qualifications, school funding should not be directed away from teaching and learning to pay for the implementation of these new qualifications.

21. Across the country, most awarding bodies run a variety of face-to-face courses associated with the implementation of new qualifications. This service contributes effectively to the professional development of teachers in their own particular subject area and to the teaching and learning in their institutions.

22. If school funding budgets are reduced by Government, then schools will be faced with making difficult decisions regarding choice of syllabuses or individual student entries on the grounds of cost alone.

23. It is important that awarding bodies provide CPD opportunities, such as the setting up of standardisation meetings, so that teachers can compare examination scripts and agree what a particular grade should be awarded. This supports teachers in improving the quality of their teaching and is also beneficial to students as well.

24. With the constant changes to specifications and assessment methods, schools expect awarding bodies to provide the materials necessary to keep them fully informed. The NUT believes that any changes to the examination system that imposes a greater burden on awarding bodies should not be at the expense of the support that schools deserve and expect from examination bodies.

25. The NUT believes that with regard to the commercial activities of awarding bodies, there must be a balance between pursuing commercial interests, such as the promotion of text books or examination software, and developing qualifications to the highest standard possible. The support and service to examination centres must not be threatened by the commercial market-led activities of awarding bodies.

26. The Institute of Mathematics has expressed its concern that there is a tendency for examination textbooks that are endorsed by awarding bodies to be too "exam focused" which encourages "teaching to the test". Endorsement of such textbooks by awarding bodies is acting as a restraint rather than an aid to teaching and learning. The NUT recommends therefore that Ofqual restricts awarding bodies from gaining any commercial advantage from the sale of textbooks as a condition for accreditation. The NUT believes that there is a conflict of interest here that needs to be resolved. If chief examiners from individual Awarding Bodies promote their own examination textbooks, chief examiners should not exploit their relationship with Awarding Bodies for commercial purposes.

27. The NUT believes that awarding bodies should continue to provide guidance and materials when new specifications are introduced. Such support clearly exemplifies the coverage and depth needed for the introduction of these qualifications.

28. The relationship between awarding bodies and teachers should not be based on a business model where the syllabus becomes a "specification", the teacher becomes a "customer" and the examination becomes "a market". Such a commercial approach can undermine a relationship between an awarding body and teachers, based on trust and support, when new qualifications are introduced. It is important that teachers, lecturers and examination officers in centres share with awarding organisations the responsibility of ensuring that examinations are undertaken fairly and efficiently.

29. The NUT believes that awarding bodies must, in the first instance, ensure that qualifications are provided efficiently and that any sums payable to an awarding body in respect of an examination and its authentication must represent value for money.

#### CONCLUSION

30. The NUT believes that examinations have been inappropriately used for school accountability purposes and for the performance management of teachers. These same assessments, however, are also used to inform teachers' performance related pay, teachers' performance management, school and college performance tables and setting school and national targets. Such use of assessment skews the assessment system.

31. Awarding bodies must continue to monitor and maintain examination standards. They have a duty to find the appropriate balance between statistical evidence and professional judgement to ensure standards are maintained across different syllabuses and qualifications.

November 2011

### Written evidence submitted by Andrew Hunt

#### 1. RELEVANT EXPERTISE OF THE SUBMITTER

1.1 I am chair of examiners for the AQA A-level "Science in Society". I have helped to devise the OCR GCSE Twenty First Century Science specifications. I act as a reviser of the papers set for these qualifications.

1.2 In 2010 I carried out a study for SCORE on the assessment of "how science works" in GCSE science specifications and reported to the Awarding Bodies on the findings (<http://www.score-education.org/media/7376/finalhsw.pdf>).

1.3 My examining experience dates back to the late 1960s when, as a teacher, I helped with the assessments for the new Nuffield Chemistry courses. I was chief examiner for Nuffield O-level Chemistry with the London Board from 1971–78. While still a teacher, I was the chief examiner for the SW Herts area CSE mode 3 in Chemistry from 1980–81. When running the Nuffield Curriculum Centre, from 1992 to 2007, I liaised closely with all three English Awarding Bodies (and their precursors) about Nuffield specifications. I was chief examiner for AS Science in Society, first with OCR and then with AQA.

1.4 I have produced textbooks and multimedia resources for GCSE, vocational and A-level science courses both as a private author and as project director for the Nuffield Foundation and the Association for Science Education. I have worked with most of the leading educational publishers in England.

#### 2. FEATURES OF EXAMINING IN ENGLAND

2.1 The ancestors of the current Awarding Bodies were linked to universities. So part of their inheritance is a commitment to high academic standards. The links to universities are now very much reduced, nevertheless the commitment to accurate and up-to-date subject knowledge should still be valued.

2.2 Examining in England has also relied on close links between examiners and teachers in schools. This is important because it means that examiners understand the impact, for good or ill, that the assessment process can have on teaching and learning. The aim is to achieve a positive "backwash effect" so that the examinations encourage good practice in schools.

2.3 Close links between examining and teaching were a feature of the CSE examinations. The dozen, or so, regional examining boards offering mode 1, mode 2 and mode 3 examinations allowed for innovation by teachers at a time when there was much uncertainty about the nature of education for the population of young people that the Newsom Report had described as "half our future".<sup>1</sup> The diversity of courses on offer recognised that the interests and needs of learners in schools across the country are not all the same.

2.4 The last great flowering of teacher-led innovations in science courses was in the 1980s when the Secondary Science Curriculum Review (SSCR) supported local development groups. The most popular GCSE Science courses today are offered by AQA. The success of these courses can be traced back to the work of an SSCR group in Cumbria. Similarly a group of advisers and teachers in Suffolk developed an approach to teaching and assessment that has evolved into the current OCR Gateway suite of specifications. More recent developments have diminished the contribution that practising teachers can make to curriculum innovation.

2.5 Even now many examiners are also teachers. However it has also become much more difficult for full-time teachers to take on senior examining roles because the pressure of accountability in schools. Many chief and principal examiners no longer teach full time or have retired from teaching.

2.6 It is important that teachers trust that Awarding Bodies will treat their students fairly. Equally examiners hope to be able to trust teachers to work fairly within the guidelines when it comes to school-based assessments. The opportunities for teachers to meet senior examiners and attend training courses is necessary in fostering

<sup>1</sup> Ministry of Education (1963) *Half Our Future*, London: HMSO (available on line at <http://www.educationengland.org.uk/documents/newsom/>).

mutual understanding and trust. However, in recent years, it has become increasingly difficult for teachers to get out of school, even for meetings directly related to student exam preparation.

2.7 The growth of forms of accountability linked to exam results has put “trust” under strain in England. Specifications have become much more detailed. Many teachers expect to see that all exam questions are very accurately targeted to assess very precisely the specified knowledge and understanding. The danger is that this narrows the curriculum, makes examination papers more routine and so inhibits imaginative teaching. Another symptom of the decline in trust has been the introduction of “controlled assessment” to limit abuses of the accreditation of coursework.

2.8 The reputation of English examination for rigour and trustworthiness helps to account for the international work of the Awarding Bodies. They provide examinations in other school systems, and work with local educators in many parts of the world to write specifications, devise assessments and train examiners. These activities in other countries are possible because the Awarding Bodies have fostered the expertise and built up substantial capacity for good examining.

2.9 This section has identified these long-standing features of examining in England which have value:

- Links to research and scholarship in Universities to ensure that courses are up-to-date and in line with current knowledge.
- An approach to assessment which encourages good practice in the classroom.
- Diversity to meet the interests and needs of different teachers and learners.
- Mutual trust between teachers and examiners.
- A capacity for innovation and change.
- An international reputation for an assessment regime that is resistant to corruption.

The important characteristics of external assessment in schools and colleges have been undervalued in an era of league tables and performance management based on a narrowly defined range of examination results.

### 3. THE ARGUMENTS IN FAVOUR OF AND AGAINST HAVING A RANGE OF AWARDING BODIES FOR ACADEMIC AND APPLIED QUALIFICATIONS AND THE MERITS OF ALTERNATIVE ARRANGEMENTS

3.1 In 1997 a spokesman for David Blunkett, then shadow education minister, said that: “The case for a single exam board becomes stronger by the week. Parents, pupils, business and universities want to know exactly what a grade means and they want assurance that all exam papers are being set and marked in the same way.”

3.2 The main case for one national Awarding Organisation is based on the view that this is the only way to avoid standards being debased in a competitive environment. Having one organisation, it is argued, would ensure consistency and fairness.

3.3 Unfortunately the track record of national organisations for central control of curriculum and assessment has not been encouraging in England. Various there have been one or more organisations concerned with these matters in the period between the founding of the National Curriculum Council (NCC) and the School Examinations and Assessment Council (SEAC) to the recent demise of QCDA. These organisations have serially failed to establish their authority when faced with the large scale and diversity of school education in a context where many educational issues are contested politically.

3.4 It seems much easier for a single agency to operate successfully, and establish a constructive consensus between schools, examination boards, universities, employers and politicians, where the population is much smaller than in England as is the case in Scotland, and—when I visited the country some years ago—Israel.

3.5 The notion of setting up a single Awarding Body is tempting, but would be mistaken. It would strengthen a dangerous centralising tendency at a time when the school system is becoming more diverse. There would be political dangers too as stated by the Sykes Review<sup>2</sup> of qualifications and assessment (2010) in its discussion of GCSE qualifications in English and Mathematics: “The review group considered whether a national examination, set and administered from the centre, would be advisable in mathematics and English. However we believe that any government would be tempted to use that examination to justify its own performance, and confidence in its reliability would suffer as a result.”

3.6 Central control of qualifications by QCDA and Ofqual (and their precursors) has often had harmful effects. Awarding Bodies have been forced to work to inappropriate bureaucratic rules and unrealistic timetables (see paragraph 4.5 below). At the same time, links with users of qualifications such as universities have been weakened. Hence the important recommendations 5, 6 and 7 of the Sykes Review<sup>3</sup> which suggest that there should be greater diversity, not less. The report on this Review sums up the discussion of regulation up by stating<sup>4</sup> that: “the development of examinations and qualifications should be in response to the demands and needs of its end-users. Any role for government regulation should follow from, not precede this”. A single,

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<sup>2</sup> The report from the Review chaired by Sir Richard Sykes can be downloaded at: <http://goo.gl/8wfmz>. See page 23.

<sup>3</sup> Sykes Review page 20.

<sup>4</sup> Sykes Review page 28.

national Awarding Body would not be able to cope with the diversity implied by the recommendations of this report.

3.7 A complementary commentary in the Wolf Report<sup>5</sup> on *Vocational Qualification (2011)* makes the point that: “central attempts to impose a neat, uniform and “logical” structure (in a complex modern economy) always fail”. This report emphasizes that “the great strength of the English system of independent awarding bodies is that it allows for multiple direct links between qualification development, the labour market and higher education”. However, this feature has been systematically undermined by government policies and regulatory changes.”

3.8 The Wolf Report<sup>6</sup> also states that: “First we should take seriously the mass of evidence showing that what really matters is teachers, and stop over-estimating what can be achieved through a written qualification outline. Second, that if an excellent teacher has a strong preference for one qualification over another, that should be respected. And third, that no single centrally defined option is every likely to suit everyone.”

3.9 Another report that has commented on the possibility of reducing the number of Awarding Bodies is the Walport Report (2010) called “*Science and Mathematics Secondary Education for the 21st Century*”.<sup>7</sup> The group which worked on the report “considered whether to recommend a reduction in the number of awarding bodies—but recognising that the availability of choice is in principle, important—decided to recommend instead that the planned stronger regulation by Ofqual, the new regulator, is given a chance”.

3.10 The links that once existed between schools, teachers and examiners have become weaker. This too is noted by the Walport Report<sup>8</sup> which found that “teachers and lecturers feel disengaged from the design and delivery of the examination system, and disempowered from influencing it”. The group was told repeatedly “that the best teachers who are active in schools, FE colleges and HEIs no longer participate in the design of qualifications or examination processes.” This disengagement would be made worse by centralisation based on one Awarding Body.

3.11 Cutting the number of Awarding Bodies would reduce opportunities for teachers and others to take an active part in the development of specifications and assessments and thus it would also reduce the national capacity and pool of expertise for examining in each main subject area.

3.12 The change would also inhibit innovation. There has been a continuous programme of influential and important innovations in examinations and assessment in England over the last 40 years. In general these have not been funded by Awarding Bodies or government. In science and mathematics much of the work has been supported by charitable institutions (such as Nuffield Foundation, the Gatsby Charitable Trust, the Salters Institute and the Wellcome Trust), professional institutions (including the Royal Society of Chemistry and the Institute of Physics) and industry. The existence of several examining boards (now Awarding Bodies) has helped rather than hindered these innovations which have been taken up and put to the test by enthusiastic teachers before leading to more widespread adoption.

3.13 Setting up a single Awarding Body is not the solution to the problems of consistency and fairness. The challenge is to establish an appropriate approach to quality assurance and regulation as discussed., for example, in the context of the vocational qualifications, by the Wolf Report<sup>9</sup> as well as in the Walport Report.

#### 4. HOW TO ENSURE ACCURACY IN SETTING PAPERS, MARKING SCRIPTS, AND AWARDING GRADES

4.1 Policy-makers and regulators need to take responsibility for the implications of any changes they introduce. The benefits of change need to be balanced against the large costs of implementation which too often seem to be ignored. Errors arise when the demands exceed the resources available to do the job well.

4.2 The system struggles to cope if increases in the scale and scope of external examining mean that there are not enough experienced and skilled examiners to set and mark high-quality papers. It takes time to develop good ideas for examination questions so that quality declines if senior examiners have to set and mark too many papers.

4.3 Shortage of appropriately skilled markers, and the desire to keep costs down, has meant that Awarding Bodies increasingly set up “marker centres” with non-specialist markers. This should not affect reliability but it can affect the validity<sup>10</sup> of examinations if questions have to be contrived to fit formats that can be marked correctly by general markers.

4.4 Crucially there needs to be a manageable timetable for implementation of changes that takes into account not only the regulatory requirements, but also the need for Awarding Bodies to work to a high standard when:

<sup>5</sup> The report from the Review of Vocational Qualifications led by Professor Alison Wolf can be downloaded from <http://goo.gl/iY8pr>. See pages 57–58.

<sup>6</sup> Wolf Report page 116.

<sup>7</sup> The Walport Report can be downloaded from: <http://goo.gl/zLYXs>. See page 48.

<sup>8</sup> The Walport Report pages 41–42.

<sup>9</sup> Wolf Report page 96ff.

<sup>10</sup> Reliability refers to the consistency of a measure. A test is considered reliable if it gives the same result repeatedly. If a test is reliable the results are approximately the same each time the test is administered. Validity is the extent to which a test measures what it claims to measure. It is vital for a test to be valid in order for the results to be accurately applied and interpreted. Validity is crucial to “accuracy”; reliability is not enough.

- developing specifications and assessment models;
- training examiners and then working with them to set specimen and the first operational papers; and
- preparing support materials to disseminate the significance of the changes to teachers in schools.

The timetable should also allow for the need to develop new teaching and learning programmes and resources both by teachers in schools and also by commercial publishers.

4.5 The stages in the introduction of the new GCSE Science specifications for first teaching from 2011 illustrate how things can go wrong. The process started with writing of National Criteria by QCA (then QCDA). The process was badly organised and, thanks to staff changes at QCA, was led by people who had lost sight of the thinking underpinning the changes to the National Curriculum and National Criteria five years earlier. Far too much of the time available was taken up over the drafting of, and consultation on, the National Criteria so that the Awarding Bodies had too little time to make a good job of preparing new specifications, assessment methods and sample assessment materials. During the process accreditation was taken over by Ofqual leading to desirable but challenging alterations to the definition of assessment objectives and other reinterpretations of the criteria at a late stage in the process. As a result the procedure of accreditation was drawn out and the dissemination of the changes to schools delayed.

4.6 Fundamentally the processes for setting papers, marking scripts and awarding grades are sound. The Ofqual code of practice is appropriate and summarises the good practice inherent in the English examining regimes that has developed over the last 40 years.

4.7 Errors arise if pressures in the system become excessive as happened in the last twelve months in the lead up to the start of teaching of the new GCSE Science specifications from September 2011. Awarding Organisation staff and senior examiners had to work in parallel on specimen assessment materials for the new courses, legacy papers for the old specifications as well as new operational papers. The pressure was immense with staff working excessive hours.

4.9 A five-year cycle for revising criteria and specifications is too short. It makes it hard to learn from experience—given that it is necessary to papers to be set two-years in advance of the date when they will be sat by candidates. Constant change means that there is very little stability in the system and this makes errors more likely as all involved have to accommodate to new content, new criteria and new objectives too often while continuing to service the previous regime.

4.8 Financial and other pressures put the Awarding Bodies under pressure to streamline processes too much and reduce the number of checks on the stages of the preparation of examination papers. The move from hard-copy to electronic processes (for most stages of examining) is not complete and the danger is that the checking processes are not appropriately “reinvented” for digital methods.

4.9 In some Awarding Bodies, “subject officers” with expertise in the subject being assessed have been replaced with “qualification managers” who rely on the examining team for subject expertise. This is a mistake because it means that the staff are much less likely to identify errors at key stages when the system is working under pressure.

4.10 Finally, in this section, it is worth making the point that all users of examination results need to have a better understanding that examining is a form of measurement and so, inevitably, subject to a degree of uncertainty. There has to be a compromise between reliability and validity. Overemphasis on reliability makes assessments less “accurate” if they lose validity.

## 5. THE COMMERCIAL ACTIVITIES OF AWARDING BODIES, INCLUDING EXAMINATION FEES AND TEXTBOOKS, AND THEIR IMPACT ON SCHOOLS AND PUPILS

5.1 The Walport Report<sup>11</sup> recommended that the practice of Awarding Bodies endorsing textbooks should be stopped. The group found that Awarding Bodies now produce textbooks aligned closely to their examination specifications. The authors of the report were advised that “these texts were directed at helping candidates to pass exams, rather than to understand the subject in depth and took the view that the alignment of an examination with a textbook business represented a conflict of interests”.

5.2 Particularly undesirable is the increasingly common situation in which an Awarding Body comes to an agreement with one publisher such that this publisher will produce the only endorsed texts and other resources. Thus the resources are endorsed before they have been produced. Other publisher may produce better texts and multimedia resources but the Awarding Body has contracted not to endorse them.

5.3 Often the tie-up between an Awarding Body and publisher leads to the senior examiners being invited to help write the texts and resources, despite the fact that the skills involved in being an effective examiner are not the same as those needed to devise good curriculum materials.

5.4 Schools have felt obliged to buy the endorsed publications, whatever their quality, because they suspect that the examiners will refer to them when setting examination questions. There is a clear conflict of interest if the senior examiners are also receiving royalties from the sale of texts and other resources.

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<sup>11</sup> The Walport Report pages 49.

5.5 Interestingly, in the latest round of publishing for GCSE Sciences, several non-endorsed publishers have produced resources for all the popular specifications. This suggests that publishers are finding that teachers have begun to appreciate the dangers of too close a relationship between an Awarding Body and one publisher and considering endorsed publications more critically. Even so, the practice is undesirable.

*November 2011*

#### **Written evidence submitted by Mark Hobson**

1. I was pleased to see in the 28 October edition of TES a call for examiners to contribute to a House of Commons Education Committee inquiry into the administration of examinations for 15 to 19 year olds. I note that written evidence is being submitted and the call is for a contribution to a seminar to be held in December. The overview set out below will, hopefully, inform the committee about an area of genuine concern such that questions will be asked of those responsible for the quality of administration of qualifications, all the way from awarding body to lecturer.

2. I work at a FE college, part of a team delivering BTEC engineering qualifications across the range level-1 to level-5. Consulting the specification for any certificate or diploma in any engineering discipline will reveal guidance that allows “appropriate assessment methods, suitable to the needs of the learner”. This sounds fantastic in terms of the indefinable mantra of individualised learning: unfortunately, it results in a distortion of assessment quality across the country and an abuse of achievement at a local level.

3. I realise the words used are strong: I shall give reasons for the inconsistency of assessment first. I had the good fortune to assist in research as to why students from a BTEC qualification were less successful when studying for an engineering degree; indeed, they were likely to fail in the first year. This gave me a chance to visit other colleges and explore student performance, how they were assessed and their preparation for university. I also interviewed and reviewed existing university students with the required BTEC qualification.

4. Following visits to a range of local colleges, it could be seen that the diversity of assessment instruments for the mathematics units varied significantly in quality, with some questions aimed at A-level standard but many are simplistic, though all can be interpreted to meet the demands of the unit criteria. All assessments were via assignments—no exams. This method is repeated across the country, as (ex-BTEC) university students admitted as much. This situation of variability will not be overcome until some aspects of all qualifications are subject to externally set exams. This will not be a popular proposal, but do we have truly academic, vocationally related qualifications, a good preparation for university or study at the next level, or just have a non-academic, easy to pass, truly vocational qualifications.

5. The end result is that has decided that the (3 A-level) equivalence given by UCAS to the BTEC qualification is not adequate and A-level maths must be included to access an honours degree programme. This similar approach is taken by other, especially Russell Group, universities; indeed some dismiss the BTEC qualification out of hand. This belittles the grand ambition for the vocational alternative to access top universities.

6. But the reasons are clear. A-level students are subjected to unseen exams, an excellent preparation for higher education. BTEC students very rarely, if at all, take exams; the nature of assessment through assignments with a two or three week deadline is open to abuse; if part of the submitted work is not quite right the assignment is referred, sometimes more than once. BTEC students are, quite simply, ill-equipped to be immediately successful at university compared to students from traditional, exam-based backgrounds.

7. The paragraphs above make a point, but it is the referral of assignments that requires serious review. Senior officials from BTEC will tell you that recent quality improvement measures will ensure such problems will be overcome. Be assured this is misleading. It is possible for a student to have more than one referral, and be given “close supervision” if necessary in more than one unit, let alone just one assignment, to ensure they pass. This situation has developed because staff are required to ensure evidence of achievement is present if asked for—perfectly reasonable. We ensure this happens with students who should perhaps fail because we are told by our managers that if our success levels are low then jobs are under threat. The principle of education is immaterial; if, in our genuine opinion, a student is undeserving of a qualification, we have to check if the data allows us to fail the student; if it doesn't, they do some more work (you can guess who does this work) to pass. This leads to weak students devaluing qualifications at all levels, yet they are now qualified to access the next level. This results in a compounding situation of raised mediocrity, because those who should fail may well be working at the next level, where they will pass anyway; this is proving an embarrassing situation for experienced staff as it undermines the value of the qualification for hard-working and deserving students.

8. To support the success argument, you only have to look at reports in the TES about colleges receiving outstanding Ofsted grades because of their 98% success rates; why some colleges have stopped delivering exam-based qualifications in favour of vocational qualifications; how some colleges have discovered that units can be delivered in 45-hours or less rather than the recommended 60-hours—“staff have really engaged with our new strategy”. To belittle true achievement is cheap, but anyone can pass any student because the system is open to abuse. Senior managers have recognised that vocational qualifications where no exams are required will result in improved success rates; it is also possible to achieve such in reduced student contact time in

some colleges. This is called efficiency, and I understand why it is done—what would you do if the system could be played to make you look good in terms of success at lowest cost? It is called efficiency, but is it education?

9. By abuse, I mean the following:

- (a) It is possible for a member of staff to claim a certificate even if a student has failed to meet the necessary requirements for success. This is less than professional, but it is possible. No improvement to quality systems can stop this happening; though having some aspect of assessment by external examination might make it a less likely occurrence.
- (b) Certificates can be requested to be given to the course leader (the member of staff responsible for the course) so they can award the certificate to the student. Unfortunately, despite a student failing, the certificate can still be claimed and kept in a locked drawer: the student has failed, does not get the certificate, but the college still has a success. This abuse can be stopped by a directive that college exam departments are not allowed to divert certificates.

10. The inquiry will focus, as it often does, on traditional areas such as GCSEs and A-levels; this is well understood as it is popular with politicians and media. I write the above to ask that you address an area under-represented (FE BTEC qualifications) or not considered really worthwhile by comparison with traditional educational concerns. With the drive for STEM subjects to be given priority, our duty is to assure the quality of all engineering qualifications—especially as apprentices often have BTEC technical qualifications as part of their framework.

11. I am always inspired by the determination of colleagues, in all colleges, who stay positive and continually desire to want to make a difference to a student's opportunity to make their way in the world. What frustrates most lecturers is the view that everyone passes no matter what and the drive of management to threaten staff with redundancy if success rates do not improve. What do you do—consistently stand on principle and lose your job, or find a way to keep your job, only possible because the administration of BTEC qualifications, awarding body to lecturer, is open to abuse?

12. The advert posted in the TES has bullet points indicating topics to be looked at as part of the seminar. May I ask that the bullet points are amended as below (my italics) so that questions prompted by the above are included as part of your inquiry. (... looking at the following topics):

- (a) The strengths and weaknesses of the UK examination *and vocational qualification assessment* system.
- (b) Accuracy and standards in examinations *and vocational qualification assessments* and how these relate to school *and college* accountability measures.
- (c) How well the examination *and vocational qualification assessment* system prepares young people for further education and employment.

13. I am sorry to have to bring these concerns to your attention, but I feel duty bound to reveal practices that are questionable. For as long as you are unaware of such ill-equipped quality systems, the administration of such will never be subject to review as it is believed they are adequate. I might add that, if asked, anyone in the system can deny the suggested abuse happens and evidence would be difficult to establish. The critical question is whether such malpractice is possible and, if so, what changes to the administration of such qualifications must be made to deter these practices.

14. I hope you appreciate the spirit which prompted this communication and the confidential nature of its content. I note from the guidance for the inquiry that it will not examine the design or merits of particular qualifications, or scope for change to the range of qualifications offered. However, I believe there is merit in the content of this overview being considered in the context of scope of the inquiry. I respectfully ask that you recognise that the sensitive nature of my comments could well put me at risk in respect of job security and that appropriate words and sentences are deleted to ensure anonymity, should you publish the content.

November 2011

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## Written evidence submitted by the Association of School and College Leaders (ASCL)

### A. Introduction

1. The Association of School and College Leaders (ASCL) represents over 15,000 members of the leadership teams of maintained and independent schools and colleges throughout the UK. This places the association in a unique position to see this initiative from the viewpoint of the leaders of the secondary schools and colleges that educate the overwhelming majority of 15–19 year olds.

### B. Should there be the present range of awarding bodies or alternative arrangements?

2. ASCL has no set view on the question of multiple, single or franchised awarding bodies since whenever we have surveyed members there has been no overall agreement on this topic. There are advantages and

disadvantages in all three systems and we believe that there would have to be considerable evidence in favour of a change to balance the turbulence it would bring to the system.

3. The main problem facing our examination system is one of overload. Young people in England in this age group take more external assessments than in any other country. The whole system is unmanageable for awarding bodies and for schools and colleges, and takes up too high a proportion of school and college budgets. ASCL accepts and supports young people taking external assessments but our young people are losing valuable learning time and are caused unnecessary stress by being faced with so many examinations.

4. Added to the overload in quantity there have been constant changes to the examination system in recent years. This is causing huge problems for schools and colleges, which are obliged to retrain staff and alter their curriculum planning, and is adding to the cost of the system. For example, GCSEs have been revised very recently and yet there are now further changes being made in order to remove modularisation and change mark schemes to award marks for spelling, punctuation and grammar. Since we have also been informed that there will be a major revision of GCSEs in 2013 to bring specifications in line with the revised national curriculum we believe that the other changes should have been delayed. Awarding bodies incur costs for these changes which are then passed on to centres in increased exam fees.

5. While a reduction in the number of awarding bodies might seem logical there are reasons to maintain the *status quo*. Our members tell us that their teachers enjoy having choice in which examination syllabus to follow, enabling them to select that which is best suited to the circumstances, interests, needs, and aptitudes of their students. This choice also acts as a spur to improved practice as centres can change to another awarding body if they feel they are receiving poor service.

6. Even if it were desirable to have a single awarding body there is evidence (from national curriculum test procurement) that there are very few organisations in the market for providing a national test or examination scheme (especially one on such a vast scale). There are additional issues connected with the three country agreement with Wales and Northern Ireland which has attempted to keep exams such as GCSE in line across the three countries. If England had one single awarding body, centres in England could still choose to take exams offered by the Welsh Board and it is difficult to see how legislation could be framed to prevent such access.

#### *C. How to ensure accuracy in setting papers, marking scripts and awarding grades?*

7. Early this year ASCL members mostly reported that the accuracy and efficiency of the examination system had improved in recent years. They were therefore disappointed by the increase in errors in exam papers this summer. Such errors are unacceptable and it is to be hoped that awarding bodies will ensure that there is no repetition of errors in such numbers. However, the sheer pressure on awarding bodies of the overloaded and constantly changing examination system have made it extremely difficult for them to operate as efficiently as they would like. School and college leaders would prefer to see awarding bodies putting their resources and energy into improving accuracy and reliability, rather than into making constant changes to specifications and awarding regulations at the behest of government.

8. ASCL has provided evidence to Ofqual for its review of the 2011 errors and has made suggestions for future improvement in the system. It is now clearly part of Ofqual's role to check that awarding bodies have the capacity to undertake their duties more effectively. We suggested:

- that Ofqual should examine more closely the training provided for senior examiners;
- that it should examine the processes followed for checking exam papers;
- that there should no longer be exam papers set by individual senior examiners which are not then checked by others; and
- that Ofqual should consider pre-testing of items, as happens for example with national curriculum tests.

#### *D. The Commercial Activities of Awarding Bodies*

9. Ofqual is now active in the economic regulation of the examination system and ASCL hopes that its actions in this area will be sufficient to bring escalating costs under control. However, in recent years government stipulations about the development of new qualifications or decisions to amend existing qualifications have been made with no attempt to cost the changes either for the awarding bodies (whose costs are passed on to centres as fees) or for schools and colleges. In future, ASCL would like to see all changes to qualifications or assessment systems properly costed, preferably before policy decisions are taken, and certainly before implementation.

10. ASCL opposes the suggestion that awarding bodies be fined for errors since fines would inevitably be passed on to schools and colleges in increased fees.

11. Given the pressure on schools and colleges to constantly improve examination results and the pressure on young people to obtain the highest grades possible it is not surprising that much use is made of the text books written by senior examiners and published by awarding bodies. Following such courses rigidly can have a negative effect on young people's genuine learning at the same time as improving their chances of the best

possible grade. It is clear that this subject cannot be considered independently of the impact of accountability measures on education including the selection of performance indicators and the publication of performance tables.

12. School and college leaders are concerned about the commercial activities of some of the awarding bodies and the apparent lack of separation between their awarding and commercial functions. Since Ofqual is responsible for the economic regulation of the examination system we believe that it should keep this under review.

#### E. Conclusion

13. I hope that this is of value to your consultation. ASCL is willing to be further consulted, to find one or more of its members with current experience and interest in this area to give further evidence, or to assist in any other way that it can.

November 2011

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#### **Written evidence submitted by Council for Awards in Care, Health and Education (CACHE)**

- The arguments in favour of and against having a range of awarding bodies for academic and applied qualifications (including A Levels, GCSEs, Diplomas, BTECs and OCR Nationals), and the merits of alternative arrangements, such as having one national body or examination boards franchised to offer qualifications in particular subjects or fields.
- How to ensure accuracy in setting papers, marking scripts, and awarding grades.
- The commercial activities of awarding bodies, including examination fees and textbooks, and their impact on schools and pupils.

This Paper provides a description of the work of Council for Awards in Care, Health and Education, a niche awarding organisation offering qualifications in care, health and education. It includes a rationale for having a range of awarding bodies, a description of how we ensure accuracy in awarding, and brief comments on our commercial activities.

#### 1. THE WORK OF THE COUNCIL FOR AWARDS IN CARE, HEALTH AND EDUCATION, CACHE

1.1 The Council for Awards in Care, Health and Education, CACHE, is a charity and a not-for-profit company limited by guarantee. It was originally called the National Nursery Examination Board, NNEB, and was set up in 1945 to provide high quality childcare qualifications. It merged with the Council for Early Years Awards in 1994 and under its new name of CACHE currently offers vocational qualifications for the childcare and education sector, and from September 2009 people caring for adults either as domiciliary care, or in residential care or as auxiliary health workers.

##### 1.2 CACHE's charitable activities are:

- to improve the skills level of the childcare, adult care and education workforce and its allied disciplines through the provision of qualifications; and
- to influence the professional standards of the workforce.

1.3 To accomplish this, we are working with employers, trade unions, professional associations, Sector Skills Councils, (SSCs), and government departments to offer up-to-date qualifications for a wide variety of professions in the Children's Services Sector including childminders, crèche staff, nannies, nursery nurses, nursery staff and managers, playgroup leaders and assistants, play workers, school support staff and teaching assistants, and the adult care sector.

1.4 Our core business is as an awarding organisation of vocational qualifications. We strive to be the provider of the best qualifications in our niche and to be highly regarded by our regulators. CACHE either writes the syllabus based on the workforce development strategy for the sector, or develops it jointly with employers, or it uses shared units developed by the SSC. CACHE then develops the assessments which are used to determine whether the candidate has gained sufficient knowledge and skills from the course to be awarded the qualification. For most qualifications at least one of the assessments is marked by professional examiners appointed by CACHE. Assessments by tutors are verified by a CACHE team of subject experts. Qualification certificates are then awarded.

1.5 CACHE is the market leader for the Childcare, Teaching Support and Playwork sector, but has a lower market share for Health and Social Care because it only entered the market in 2009 at the request of its customers who were looking for an alternative to the larger awarding organisations.

1.6 CACHE has customers in 11 countries although our core market is England, Wales and Northern Ireland. We have approximately 1,000 active customers including FE Colleges, independent training providers including employers, and schools. Some of our vocational qualifications are available in the Welsh language. We registered more than 100,000 learners in 2009–10.

## 2. DEVELOPMENTS IN AWARDING

2.1 The role of awarding organisations is continuing to evolve from being organisations which developed and marketed their own qualifications to being organisations that award qualifications containing units developed by Governments and Sector Skills Councils. The awarding bodies compete on brand, customer support and on assessment methodology. This change will not be fully implemented till 2012.

2.2 CACHE has prepared for this by continually improving its processes so as to increase value to customers. On-going development of improved processes and new IT developments will allow CACHE to offer a better service to all its customers.

2.3 The aim of the new Qualifications and Credit Framework (QCF) is to assist candidates to build on learning already achieved and gives them more choice and flexibility to put together a collection of units which match their own particular learning needs. CACHE has 56 qualifications accredited for the QCF. These are high quality, which are inexpensive for training providers to implement, which offer maximum benefit to learners and which are sufficiently flexible to match the breadth of the different learning and assessment styles of candidates. They combine competencies assessed in the workplace and knowledge assessed by a variety of assessment methods including assignments prepared by CACHE.

2.4 A new Regulator, Ofqual, has replaced the Qualifications and Curriculum Authority. Ofqual is proposing a lighter touch, market-driven system of regulation based on the measurement of risk and the provision of best value to learners and learning providers. We welcome this initiative.

## 3. VALUE ADDED BY CACHE

3.1 Evidence that our qualifications raise the quality of care and education for children and their families comes from successive Ofsted reports into the quality of daycare provision, from the high levels of employer demand for CACHE qualifications and from the Effective Practice in Preschool Education (EPPE) research programme. CACHE is the major provider of qualifications in the children's sector. CACHE has only just entered the adult health and social care market and it is too soon to assess how its presence is affecting beneficiaries in this new sector.

3.2 Our customers are telling us that they value us. CACHE commissions regular customer satisfaction surveys. Last year's survey undertaken by an independent agency shows that 94% of customers were satisfied with our service. This is an encouraging indicator of the customer-focused improvements that have been made throughout business operations during the last 12 months. CACHE will be working to increase our customer satisfaction during the next 12 months.

3.3 We also ask our customers why they contract with us rather than our competitors.

3.4 In our 2010 survey, training providers told us that they reviewed their selection of Awarding Organisations regularly. More than half of providers were likely to change Awarding Organisation for at least one qualification in the next three years.

3.5 Main considerations when providers decide which awarding organisation to use are:

- Suitability of the qualification for learners including progression to higher levels and employment.
- Ease of using the awarding organisation's online system for registering candidates and recording assessment results.
- Speed of response of awarding organisations to customer queries.
- Type of assessment.
- Reputation of the awarding organisation and the qualification with employers and learners.

3.6 Price is very important but quality will always be the deciding factor. Least important was the breadth of offering.

3.7 Providers associate the following attributes with a "good" awarding organisation (AO):

- Trustworthy (with learners coursework, to get information correct).
- Efficient (quick and timely customer service).
- Learner-centred.

3.8 They also want awarding organisations to embrace innovation, particularly for assessment, though this is slightly less important than the above.

3.9 When deciding whether to purchase from a particular awarding organisation, providers draw on their experience/perceptions of:

- "*Functional*" factors such as overall efficiency including ease of administration; and
- "*Emotional*" factors such as reputation and track record.

3.10 Compared to the larger awarding organisations, CACHE is rated more positively for having a friendly face and offering a personalised service, for being trustworthy, quick and timely and for leading in development of qualifications and assessment, more “consultative” and “collaborative”.

3.11 Training providers want choice and competition because it reduces risk and it enables them to meet learner and employer needs. A single provider would not provide the variety of qualifications and pathways required by employers and larger numbers of learners would be affected if a service failure occurred.

3.12 In summary, a niche awarding organisation is small enough to:

- Tailor qualifications for learners needs.
- Respond quickly to customer suggestions for improvements.
- Employ up-to-date subject experts who can lead on qualification development.
- Be close to employers and respond quickly to their changing requirements.
- Be more “consultative” and “collaborative” with customers and employers.

#### 4. HOW TO ENSURE ACCURACY IN SETTING PAPERS, MARKING SCRIPTS AND AWARDING GRADES

4.1 Senior staff at CACHE continually reviews the risks CACHE faces, prioritising these in terms of potential impact and likelihood of occurrence and identifying means of mitigating the risks. A Risk Management Strategy has been implemented and the Risk Register is reviewed annually by the Board. In addition, CACHE’s Scrutiny Panel monitors CACHE’s current internal controls and quality assurance systems.

4.2 Any events due to failure or variation to meet CACHE’s Standards are reported to the Scrutiny Panel. CACHE has put in place quality controls to minimise these and to ensure a fast response when they do occur. It has improved the way that it records and responds to complaints by customers. The integrity of CACHE’s qualifications is paramount.

4.3 Every centre undertakes a self-assessment and this is checked and risk rated by the CACHE’s customer quality advisers. High risk centres are given more support. CACHE’s customer quality advisers investigate all infringements of regulations and provide support and training to Centres as appropriate. CACHE’s staffs verify a sample of assessments made by centres. Another team of Principal Examiners monitors assessments made by CACHE’s team of examiners.

4.4 The key to high standard awarding is to:

- Have rigorous processes which must be followed by all staff.
- Have high quality risk management which predicts what can go wrong and then put into place preventative actions.

4.5 CACHE believes that the interlinked factors for accuracy in awarding are:

- Subject specialist knowledge in relation to the qualifications offered.
- Rigorous application of the assessment and awarding processes.
- Training, professional development and management of writers, examiners and scrutinisers.
- Quality assurance processes.

4.6 Although governed by regulatory requirements and recognised assessment principles, translating these critical factors into accurate assessment practice is the skill of the individual awarding organisation.

#### 5. ACCURACY IN SETTING PAPERS

5.1 CACHE has:

- Processes which provide auditable evidence at every stage.
- Sources of subject specialist knowledge to ensure both that the dissemination of the syllabus requirements/learning outcomes into the requirements for the candidates (questions/assessment criteria) and that the responses expected of candidates (answers/evidence) are realistic, current and correct.
- Consistent test/assessment specifications, built on learning outcomes and assessment outcomes appropriate to the assessment level.
- Development of assessment writers, for each qualification, in relation to the precise subject content, assessment outcomes and levels, requirements of the test specification and assessment writing techniques appropriate to the type of papers to be set.

5.2 Accuracy is dependent upon:

- The individual Awarding Organisation’s commitment to the detail of the assessment item writing process undertaken by specialist assessment writers (as above), together with valid systems for editing, revision and scrutiny of individual assessment items.
- Compilation of papers through adherence to the test specification.

- Paper revision and scrutiny by independent subject specialist revisers and scrutinisers.
- Internal review and audit at all stages of compilation.
- Consistent monitoring by a subject specialist/senior examiner/decision maker at each stage from assessment item writing to test paper publication.

5.3 CACHE offers its assessments in English and in Welsh. Accuracy in setting bilingual papers, following formal translation, involves a bilingual subject specialist who ensures the language and context is correct in both languages.

## 6. ACCURACY IN MARKING SCRIPTS

### 6.1 CACHE:

- Maintains robust pre-standardisation and standardisation processes which exemplify precisely the requirements of the assessment to all examiners.
- Provides detailed support materials for examiners through realistic and accurate marking guidelines or indicative content.
- Provides a high level of subject specialist expertise into the marking process.
- Provides training and development opportunities for examiners to maintain specialist knowledge and to sustain skills in methods of marking appropriate to particular assessments.
- Maintains on-going standardisation and monitoring procedures of all examiners.
- Maintains an audit of examiners' performance to identify their adherence to the requirements of their role and to assess their reliability, in order to ensure consistent standards of marking.

## 7. ACCURACY IN AWARDING GRADES

### 7.1 Accuracy in awarding grades is dependent upon parallel systems of:

- Grade review—comparison of current scripts with archived materials to ensure comparability of grade boundaries, (or for a new assessment, comparison with archived scripts in a related area at the same level in order to define the expected standards and therefore the marks which will delineate the grade boundaries). This should provide comparability and accuracy in grades awarded between assessment sessions and year on year.
- Examiner review—detailed monitoring of marks returned by examiners to ensure that marks awarded will enable scripts to be located within the appropriate grade boundaries.

7.2 To achieve a high degree of accuracy in awarding grades, the individual awarding organisation will need to have in place awarding processes which include:

- Investigation, by the use of specified sampling procedures, of marks returned by examiners to confirm accurate application of authorised marking guidance to ensure the accurate mark for all scripts.
- Moderation of marked scripts and/or possible re-marking to ensure consistency across all examiners and scripts, before recommended grade boundaries are applied.
- Provision for the review against archived scripts from previous years before agreeing the appropriate marks for grade boundaries.
- Application of agreed grade boundaries.
- Borderlining procedures to be applied for candidates at one mark below the grade boundary.
- Checking-out processes which ensure that manual and electronic systems have recorded marks and allocated grades accurately.
- Application of nationally recognised adjustments for candidates with special considerations that apply at the time of the assessment.
- Results enquiry processes.

7.3 CACHE believes that the systems which it has in place provide the fairest outcomes for learners undertaking assessments and gaining qualifications which will equip them to progress into the specific areas of care, health and education.

## 8. COMMERCIAL ACTIVITIES OF CACHE

8.1 Approximately 92% of our income is derived from learner and customer registration fees, the remainder coming from the sale of publications and badges.

8.2 Customers are asking awarding organisations to provide specialist support materials to increase learner achievement rates and to reduce the costs of teaching. The materials requested include text books tailored to individual awarding organisation's qualifications, teaching resources which can be put on a training provider's intranet, often as part of a learner management system such as Moodle, e-learning materials to support face-to-face training by a lecturer and e-portfolio products. These materials are often offered by awarding organisations at a loss to provide a more competitive offer than other awarding organisations.

There is however a risk with an awarding organisation offering these services—the awarding organisation must be able to demonstrate that these services do not give learners unfair advantage. This is very difficult to do, and so CACHE provides its support services through third parties so that there can be no accusation that CACHE gives preference to certain groups of learners.

8.3 CACHE publishes its fees openly (as required by the Regulator) but not all awarding organisations do this. Some awarding organisations offer large discounts which make their fees lists misleading. Others offer hidden discounts if a training provider transfer all their business to them.

8.4 Some awarding organisations are also selling e-learning directly to learners. This has potential for conflict of interest as awarding organisations must be able to demonstrate that they treat all candidates equally regardless of whether they were training by the awarding organisation. Some awarding organisations have set up arm's length companies to provide the e-learning but the potential conflict of interest remains.

## 9. SUMMARY

9.1 We believe strongly that there is a strong market need for a variety of specialist awarding organisations who experts in their vocational area(s), are trusted by the employers in their sector, and who can quickly adapt a qualification to meet employer or learner needs.

9.2 We believe that accuracy of awarding depends on the strength of the risk management throughout the awarding organisation, and the rigid adherence to high quality processes.

9.3 All awarding organisations are operating in an increasingly commercial market, and this can lead to conflicts of interest which need to be actively managed to ensure that standards are maintained and all learners are treated equally.

November 2011

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## Written evidence submitted by GL Assessment

### 1. ABOUT GL ASSESSMENT

1.1 GL Assessment is a leading independent provider of educational assessments, including literacy and numeracy assessments, SEN diagnostic tools, and attitudinal and stakeholder surveys. Assessments include the *Pupil Attitudes to Self and School (PASS)* attitudinal survey and the *Cognitive Abilities Test (CAT)*. In-depth interpretation services help to identify appropriate intervention strategies.

1.2 Distinct from awarding board materials, independent providers' assessments are non-mandatory and purchased using a school's discretionary resource budget rather than its formal examinations budget. The company has relationships with over 85% of UK primary and secondary schools and to date has delivered over three million nationally standardised online tests.

### 2. ONE OR MANY AWARDING BODIES

2.1 Despite the initial steps taken by the current Government to broaden performance tables, the tendency remains to read tables in a narrow and decontextualised manner. This trend is exacerbated by the annual expectation of improved exam grades and coalesces with the commercial pressures felt by multiple awarding bodies.

2.2 The commercial attractiveness of students retaking modules is likely to have distorted standards over time. There is also potential for the commercial activities of awarding bodies, in particular through the publications supporting their examinations, to contribute to a narrowing of the curriculum. This seems to be at odds with the Government's intention to slim the National Curriculum so that schools have greater freedom in its design and delivery, and the Government needs to consider how these two approaches will react with one another.

2.3 Having a single national awarding body may overcome a number of these weaknesses, and would also provide a consistency and comparability in standards. Arguably, given that earlier Key Stages are centrally administered, the necessity of changing this approach at Key Stage 4 and beyond should be questioned. However, the success of a single body is neither inevitable given the current set of incentives nor an approach without its own flaws. In particular, a single body could foreseeably become complacent in its dominance, leading to quality and content stagnating.

2.4 It may be that a hybrid approach should be considered. The Committee's terms of reference suggest a body franchised to offer qualifications in a particular subject field. Another option could be that awarding bodies are regionalised, with bodies bidding for a particular area for a period of five years or so. This would go some way to creating educational consistency as well as encouraging the generation of best practice through positive competition in service delivery and qualification standards.

### 3. FURTHER INFLUENCES ON THE EFFECTIVENESS OF THE AWARDING BODIES SYSTEM

3.1 The Committee's inquiry focuses on the extent to which current system of awarding bodies delivers the best outcomes. However, to be effective, any changes must take into account the influences on that system besides the number and work of awarding bodies. Doing so includes, for example, heeding the potentially distorting impact of narrow performance tables.

3.2 Any changes to academic and vocational qualifications should be carried out in tandem. The framework outlined in the Wolf Review will have a positive effect on qualification standards, not least because it will help to ensure 14- to 19-year-olds have appropriate and worthwhile options available to them. The greatest benefit would come from a system designed to: enable pupils to pursue the best route for them, raise expectations, and hold teachers accountable for whether they get the best out of their pupils rather than judge them on getting pupils through examinations.

3.3 Longitudinal analysis and independent checks should also be used to establish the quality of examination papers and accuracy of grades. Key Stage results are often used predictively to look at a pupil's likely GCSE grades, but this approach could be made more effective by incorporating triangulation into everyday teaching practice. This would help students fulfil their potential and evaluate the value a school is adding, as well as acting as a quality reference point.

3.4 Triangulation—that is, using a jigsaw of independent and teacher assessments to develop a rounded view of the pupil's strengths and weaknesses—is an important bridge between a teacher's curricular freedom and protecting the quality of national qualifications. Triangulation can give teachers independent evidence of their pupils' abilities and help them to tailor their approach accordingly. In particular, with a less prescriptive curriculum, such independent assessment will be necessary for teachers to benchmark their pupils, with the implication that anomalies between such benchmarks and exam grades can be analysed and the appropriate changes made. Moreover, triangulation will give teachers greater confidence in pupil progress and depth of learning, as well as alleviating the pressure to respond only to a particular awarding body.

### 4. CONCLUSION

4.1 GL Assessment believes a hybrid approach, whereby a single examination body offers qualifications in particular regions or subjects but competes with others to establish best practice, is likely to have the most positive impact on educational outcomes. However, beyond the question of whether there are one or many awarding bodies, the further influences on the effectiveness of any awarding body system need to be addressed if the best and fairest educational outcomes are to be delivered. These include: the impact of performance tables, the range of appropriate options available to students, and the use of independent checks over time on student progress.

*November 2011*

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#### **Written evidence submitted by Institute of Mathematics and its Applications**

The arguments in favour of and against having a range of awarding bodies for academic and applied qualifications (including A Levels, GCSEs, Diplomas, BTECs and OCR Nationals), and the merits of alternative arrangements, such as having one national body or examination boards franchised to offer qualifications in particular subjects or fields.

1. The Institute is clear that the present competition between awarding organisations does not promote excellence in teaching mathematics in schools, and may even drive down standards.

2. Public examinations should meet three main purposes:

- accrediting achievement;
- indicating preparedness for progression; and
- providing accountability within the education system.

3. The Institute considers that all three of these purposes would be better met by a system without competitive pressures.

4. Stakes in public examinations are so high that teachers put considerable effort into identifying the awarding organisation and specification most likely to maximise the outcomes for their students. At the simplest level, this may mean seeking out the examination papers that appear most straightforward. This in itself provides a pressure on awarding organisations to set papers that appear reasonably straightforward. The Institute has a number of concerns about the impacts of competition on the education system.

5. Our principal concern relates to the kinds of challenges set to candidates in GCE and GCSE mathematics examinations. We consider that mathematics assessment should reflect what end users and the mathematics education community value about the subject, and should therefore provide substantial questions, rich in challenge and problem-solving opportunity, that leave teachers and their students in no doubt that solving problems in context and demonstrating reasoning ability are highly valued mathematical skills. Our concern is

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that this kind of rigorous assessment is gradually disappearing from GCE and, particularly, GCSE mathematics examinations in England.

6. We have considered what might be the causes of this dilution of mainstream public examinations. We acknowledge that the examinations criteria that awarding organisations use as a basis for preparing papers do emphasise the importance of solving problems and reasoning clearly. Nevertheless, the papers that emerge fail to reflect the central significance of these essential aspects of mathematics.

7. It is clear that awarding organisations have significantly improved their technical performance in the preparation of examinations that offer candidates the opportunity to demonstrate what they know, understand, and can do. So the question arises why they have not also increased the extent to which examinations reflect the mathematical qualities that end users and the mathematics education community would most welcome.

8. At a technical level, examiners are rightly wary of questions in which candidates might possibly go badly wrong, as these are both difficult to mark and are likely to be wasteful of marks. But this caution should not be allowed to override the importance of developing questions that assess the kind of qualities that success in these examinations should denote.

9. The Institute takes the view that the introduction of appropriately challenging mathematics papers, for both GCSE and GCE, will not happen whilst multiple examinations exist that are intended to assess the same curriculum in the same way. We do not believe that awarding organisations will be willing to set more demanding questions enabling proper assessment of higher level skills for higher attaining students if by so doing they would risk losing market share.

10. On the other hand, a system without competitive pressures would offer a level playing field for candidates, and would permit the kinds of examinations that the mathematics education community would support. This could be achieved in a number of ways. The Institute considers that any of these approaches would improve on the present situation.

11. One approach would be to have a single awarding organisation and a single specification. This would ensure fairness for candidates. A single award would allow for far greater scrutiny, and would concentrate the talents of the best examiners. It would permit a wide variety of curricula and teaching approaches to flourish, and a range of textbooks to support this variety. It would make the case that teaching to the test is not regarded as providing a good curriculum.

12. An alternative is to franchise one of several awarding organisations to provide mathematics examinations for a number of years. This could involve existing awarding organisations tendering for a single national contract to award mathematics examinations for a period of time.

13. A more radical approach would involve separating examining processes that determine standards from those that are more to do with marketing qualifications. The former set of responsibilities includes drafting specifications, paper setting, mark scheme writing, marking and awarding. A public body (perhaps DfE or Ofqual) would award contracts for these processes for fixed periods to contractors for specific subjects or groups of subjects. The price structure of the contracts should be such as to give no incentive to the contractor to increase or decrease the uptake of their subject(s). The present awarding organisations would be able to bid for the contracts but would need to separate the operation from their other activities. Others would also be able to bid (eg a university education department, or perhaps a subject grouping/HEI consortium). The contracts would be awarded on a quality basis rather than value for money alone. The awarding organisations would continue to badge the papers and market specifications (more than one could offer the same specification), distribute question papers, distribute results and certificates, as well as providing customer service. Under such an arrangement, awarding organisations would compete on price and quality of service. As changing awarding organisation would no longer be so traumatic, a more fluid market would exist in which centres or consortia of them could seek to drive down costs.

#### *How to ensure accuracy in setting papers, marking scripts, and awarding grades*

14. The present approach to setting papers relies entirely on the professional experience of examiners who draft the questions, and revisers and assessors who check their papers before printing. In mathematics, these processes are even more important than in other subjects, as it is the demands of the questions themselves that provide the examination with its challenge, or lack of challenge. This is different from most other subjects in which a question is capable of being answered at a variety of different levels, and where the differentiation comes from the mark scheme.

15. The costs of exam writing have been held down by awarding organisations and papers are therefore constructed too hastily, usually by a single person, with questions tending to be too similar to those of earlier years. This makes the papers highly predictable. Questions tend to avoid significant challenge for candidates, as this can lead to very low marks on the question, which reduces the effectiveness of the paper. A more thoughtful approach is needed that allows examiners the time to develop new ideas carefully, taking research evidence (eg about common misconceptions) into account. The nationally produced National Curriculum tests for Key Stages 2 and 3 form an excellent model in which all items are developed by a team of writers and pre-tested. The additional expense of such an approach is justified in mathematics where the stakes in GCSE and GCE assessment are so high. It is worth pointing out that higher quality mathematics examinations form

an essential element in increasing take up of science and mathematics, on which the UK's economic future depends so heavily.

16. In some instances, mathematics papers are re-typeset by the awarding organisation after they have been set and revised. This is not necessary in the 21st century, and can introduce inaccuracy, as great expertise is needed to typeset mathematical expressions correctly.

17. The Institute considers that onscreen marking is advantageous as it permits more, and more flexible, scrutiny of marking by the awarding organisation.

18. Awarding issues are critical, since the award is intended to ensure that, whatever paper has been sat, in whatever specification, the grade awarded can be regarded as having the same meaning in terms of achievement in the subject. In practice, however, awarding is far from an exact science. In seeking to meet these key objectives, therefore, awarding organisations use two principal approaches. The first is to assume that the candidature will remain broadly comparable from year to year, justifying the stipulation that the proportions achieving each grade should also compare closely to those of the previous year. The second approach is to give statistical information about the impact on grade distributions a much greater role than examiners' judgements about candidates' actual performances in setting grade boundaries.

19. The effect of variability in awarding is that there is insufficient comparability of standards across awarding organisations, between specifications, and between subjects. A level playing field for our young people as they sit these critical examinations is too important to continue to permit the substantial differences that currently persist.

*The commercial activities of awarding bodies, including examination fees and textbooks, and their impact on schools and pupils*

20. The Institute of Mathematics and its Applications issued a Position Statement on Awarding Bodies and Teaching Resources in September 2009. The Institute's views on the links between awarding organisations and textbooks remain as they were then. The statement reads.

*21. The IMA is concerned about developments in the market for textbooks and other teaching resources (in what follows "textbooks" should be construed as including other teaching resources) for courses preparatory to public examinations which it believes to be detrimental to the public good. The practices have arisen of the endorsement of textbooks by awarding bodies and the publicising of authors being examiners.*

*Many centres feel obliged to purchase textbooks which have been written by examiners and have been endorsed by awarding bodies in case they confer some advantage and to protect themselves from criticism for failing to have done so. Even for those centres wishing to use broader criteria in the choice of resources this restricts their choice as other publishers find they cannot achieve commercial viability and withdraw from the market.*

*The versioning of textbooks to particular specifications fragments the market which makes it difficult for a variety of approaches, especially innovative ones, to be published. It also causes a culture to arise in which textbooks are considered obsolete when specifications change, with the consequent cost to centres of replacing stock.*

*Examination specifications need to be self-contained and sufficiently detailed so that all are confident what is required and there should be no suspicion that dependence must be placed on de facto amplification provided by texts where a financial relationship exists between the awarding body and the publisher.*

*Good examiners are not necessarily good writers of textbooks. Although there are exceptions, there is a tendency for the books to be very exam focused which is a further factor encouraging teaching to the test; those teachers who feel the most need for endorsed texts are those least likely to be confident to break free from the textbook.*

*Endorsement is effectively acting as a restraint to trade rather than as a kite-marking system. Whilst innovative projects and pilots should quite properly be able to publish linked supporting material, and awarding bodies should be able to support innovative or small-entry examinations with booklists and free materials, anything from which awarding bodies gain commercial advantage should be prohibited as a condition of accreditation by the regulator.*

*For the maintenance of public confidence in standards there must be a clear separation, between teaching and learning and the public assessment thereof, which does not admit of any suspicion of conflict of interest. It is in the public interest that the resources published for use in our schools and colleges are supportive of good teaching and learning, and it is proper that the regulatory authorities should take steps to prevent practices not conducive to this.*

### Written evidence submitted by the Association of Teachers of Mathematics (ATM)

*The arguments in favour of and against having a range of awarding bodies for academic and applied qualifications (including A Levels, GCSEs, Diplomas, BTECs and OCR Nationals), and the merits of alternative arrangements, such as having one national body or examination boards franchised to offer qualifications in particular subjects or fields*

1. The argument for a range of awarding organisations has always been that it offers choice and will help to maintain standards. In reality, market forces encourage competition and a race to the bottom—“what can we get away with” (Science and Learning expert group). Schools may have concerns about the extent to which the exams they enter students for reflect the statutory curriculum, but the drive for results at any cost means they opt for the exams that they perceive to be “easier”. According to Ofsted, “teaching to the test” in mathematics is both prevalent and increasing. Innovation in mathematics is stifled as awarding organisations that attempt a more novel approach are likely to lose market share.

2. In high stakes subjects like GCSE mathematics and English a national system of exam development would be preferable. This doesn't necessarily mean a national body for qualifications. Awarding organisations could continue to administer the nationally developed exam and provide support for centres, but by having a single exam issues around parity of esteem, maintenance of standards and quality of assessment design would be addressed.

*How to ensure accuracy in setting papers, marking scripts, and awarding grades*

3. There are limited numbers of expert examiners. The development of public examinations is a “cottage industry”. Unitisation/modularity means that exams may have to be developed two or more times a year, so expertise is spread very thinly. The process for scrutinising papers is reasonably rigorous but if assessors fail to work through exams thoroughly then errors will be missed.

4. In the development of National Curriculum tests, items are subject to review by curriculum and education experts and practising teachers, they are pre-tested with hundreds of children and then carefully compiled into papers that ensure a balanced assessment of the curriculum. Whilst this development process is expensive it means that the papers are accurate and the marking scheme robust. It would be worth considering the introduction of such a system for GCSE mathematics and English, given their high status.

5. Multiple awarding organisations competing for market share militate against ensuring consistency across specifications, across awarding organisations and across subjects. Examiner expertise is one of the key ways in which standards are maintained over time, working within a stringent regulatory framework. However the number of expert examiners is limited and the role of statistics in awarding, can lead to potential conflicts. Should the grade profile for each subject be the same year on year? Should the proportion of grade C and above in GCSE mathematics be much lower than the proportion for GCSE English? After all, the results for KS2 English and mathematics are similar.

*The commercial activities of awarding bodies, including examination fees and textbooks, and their impact on schools and pupils*

6. In 2008–09 schools spent almost £300 million on exam entry fees. This is a huge amount of public money to the awarding organisations. According to Ofqual, the amount spent has increased considerably over the last six years with increasing numbers of unit/module resits, and repeated and multiple entries as schools strive to improve their performance in government accountability measures.

7. Some awarding organisations make special offers on fees to centres that choose to enter candidates for more than one exam (for example GCSE and functional skills). Other awarding organisations produce textbooks written by their examiners which are made available to centres that adopt their specifications at reduced rates. These textbooks better reflect the awarding organisation's examinations than the statutory National Curriculum. This commoditisation of high stakes assessment reduces students to statistics for government performance measures. The development of genuine understanding and positive dispositions towards subjects in particular and learning in general, is seriously undermined by high stakes performativity.

8. The link between awarding organisations' qualifications and textbooks needs to be broken as soon as possible. If the exams were produced centrally then awarding organisations could produce textbooks as part of their support package for centres. However, these text books would need to address the entire programme of study rather than providing preparation for specific exams.

## Written evidence submitted by EMTA Awards Limited (EAL)

### 1. EXECUTIVE SUMMARY

(i) We propose that competition amongst awarding organisations, in the vocational education and training sector, provides a stable and cost effective service to learners and their centres and which also contributes significantly to the maintenance of standards.

(ii) A change to a single awarding organisation isn't likely to attract the employer involvement and engagement levels currently supporting awarding organisations, nor is such a move likely to remove the problems experienced with examinations in the public domain.

### 2. THE SUBMITTER OF EVIDENCE

(i) EMTA Awards Ltd (EAL) has a 47 year history of awarding qualifications in the engineering and related occupational sectors. Our roots were laid down in 1964 when the Engineering Industry Training Board (EITB) was founded under the Industrial Training Act. Our position as the leading awarding organisation for industry was established by the introduction of National and Scottish Vocational Qualifications (N/SVQs) in the 1990s. The EITB was succeeded by the Engineering Training Authority (ETA), then EnTra, the industry training organisation, before emerging as the Engineering & Marine Training Authority (EMTA). EAL (EMTA Awards Limited) was incorporated as an independent awarding organisation in 1998, backed by a managing director and board with vast experience of meeting industry needs.

### 3. EVIDENCE

(i) We currently provide vocationally-related qualifications at levels 1 and 2 on the Qualifications and Credit Framework to over 2,000 students aged between 14 and 16, across England, Wales and Scotland through tripartite arrangements with 123 local Colleges of Further Education, Employers and Private Training Providers. These qualifications enable both the application of disciplinary knowledge—in mathematics and science—to engineering concepts and, conversely, enable the use of those applications to strengthen and reinforce the learning of the disciplines.

(ii) The learning outcomes of our qualifications are designed to be assessed through a variety of media—not only “examinations”—and it is the availability of this variety, coupled with our employment of full-time technical experts, who provide advice and guidance on both learning and assessment and provide a valuable support mechanism for teachers and lecturers.

(iii) Whilst the content of units of learning extant upon the Qualifications and Credit Framework in England, and its equivalents in Wales and Scotland, is fixed and used by all awarding bodies offering an individual qualification, the flexibility that allows differing methods of assessment and levels of service provision to centres can only exist in a competitive environment. This competition allows schools and colleges choice in their selection of awarding organisations for different qualifications—this choice being related directly to the needs of each centre and its learners.

(iv) The concept of having a single awarding organisation for schools may have attraction in general education but there are grave dangers in introducing such a situation in the world of vocational education and training. An organisation such as ours already works closely with employers across the industries we serve to ensure that the design, content and assessment of our qualifications meet the needs of those industries—providing them with nationwide sources of work-ready candidates to fill their skills needs. Our strength comes from our engagement with these employers and our own employment of subject experts who provide that crucial “translation” from employer needs into syllabus content. We are doubtful that a single awarding organisation would galvanise employers, across every occupational area, to engage in the qualification development process to the level that currently exists. Given that such involvement is seen to be important in the current government view of the future for vocational education and training, the existing situation is far more able to meet those aspirations.

(v) Although we, like all awarding organisations, recommend teaching and learning resources that support our qualifications, we would not consider it necessary or desirable to have any commercial link between the separate undertakings of awarding and publication activities.

(vi) We are mindful of the Select Committee's concern about the quality lapses that seem to occur annually in general examinations. However, these are unlikely to be remedied by the introduction of a single awarding body—that which exists in Scotland has not provided the freedom from error hoped for when it was created. The process which creates, examines and grades examination-type educational assessment is just that—a process. As such it requires clear and decisive management within the organisations that produce these products and a rigid and defined quality control system. Language that deliberately uses industrial and commercial terminology, not education speak—wherein lies a possible issue—many of those involved in general examinations have a tendency to lean towards an educational background rather than one which understands and applies relevant and focussed quality management into the processes.

(vii) Awarding organisations are, in the main, not-for-profit bodies but as such need to see an income which gives both a return on their investment and sufficient surplus to re-invest in the development of future

qualifications meeting the needs of employers and learners alike. In such a situation, it is arguable that managers within these organisations have an even greater responsibility for the appropriate stewardship of their resources than their opposite numbers in other organisations, whose actions will be subject to shareholder scrutiny.

#### 4. RECOMMENDATIONS

(i) We would urge Members to recommend that choice amongst awarding organisations in the vocational education and training sector holds the greater value and is more appropriate for meeting the needs of learners, centres and employers both now and in the future.

(ii) The Select Committee may also wish to consider the level to which commercial best practice in quality control and assurance is applied across the whole examination process and the extent to which external Regulation of the minutiae of that process has had the effect of impinging upon and possibly distracting from the quality control of the outputs.

November 2011

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### Written evidence submitted by The Royal Statistical Society

#### INTRODUCTION

1. The Royal Statistical Society (RSS) is a professional body and learned society devoted to the interests of statistics and statisticians.

2. Within its broader remit of promoting the public understanding of statistics and the competent use and interpretation of statistics, the Society works to ensure that the discipline of statistics and the use of data are competently taught, learned and assessed at school, further education and higher education levels. The Society also promotes statistics and the appropriate use of data as a core competency in the workplace and through lifelong learning.

3. The Society believes that, for modern life, it is essential that all learners should be acquainted with the basic principles of probability, risk and problem-solving using statistics. We take the view that statistical skills are essential tools across the curriculum and for the sciences (including the social sciences), and they are a vital life skill.

4. The Society itself has over 60 years of experience in curriculum development, setting and awarding internationally recognised statistics qualifications at a range of levels (the Ordinary Certificate which is approximately between GCSE and A level; the Higher Certificate at approximately the level of the first two years of UK university statistics and the Graduate Diploma which is a full degree-equivalent in statistics).

5. Although statistics pervades many school subjects, the Society notes that statistics is largely taught, learned and assessed within the mathematics curriculum. Hence many of the points below refer to the mathematics curriculum and its development.

6. The Society has considered its responses to the questions in the consultation invitation after seeking views of members who are educators and education research specialists, including those who have experience of the assessment process at both GCSE and A level.

7. The Society is unanimous in its view that curriculum development, delivered by qualified subject specialists is crucial and that no future awarding body framework or specification structure should put curriculum development at risk.

*1. What are the arguments in favour of and against having a range of awarding bodies for academic and applied qualifications (including A'levels, GCSEs, Diplomas, BTECs and OCR Nationals), and the merits of alternative arrangements, such as having one national body or examination board franchised to offer qualifications in particular subjects or fields?*

8. Noting that the “best and fairest” educational outcomes for young people are the target, we believe the best way to help to achieve these outcomes is through a system which strongly incentivises high-quality curriculum development. Curriculum research and improvement are vital to help achieve this. Overall, the matter of how this is being delivered is not something the Society takes a strong view on; indeed we believe this key outcome could be delivered through different types of systems.

9. The Society is an awarding body and uses its own members and others brought in because of their experience and expertise to develop and assess its qualifications. This is an example of subject specialists successfully contributing to the development of a curriculum within a single awarding body.

10. Other countries successfully develop innovative curricula in a context with single awarding body. A good example in the area of statistics is New Zealand which has developed one of the most promising mathematics and statistics curricula in the world.

11. Clearly, if a single awarding body should be established there would need to be an understanding that its remit includes curriculum research and development by subject specialists. In addition, to ensure there is room for input from key experts in the different subject areas such a system would need to have due checks and balances in place to avoid government-driven control of the curriculum. The Scottish model is one that may be worth pursuing, and it would be essential that a single awarding body retains suitable independence from both Government and commercial interests.

12. A situation with competing awarding bodies, such as the current system in England, has created an environment which stimulates the development of innovative and forward thinking approaches. For example, the range of awarding bodies currently in place means they are prepared to establish project syllabuses (such as Nuffield Physics and SMP and MEI Mathematics) and to develop curricula in new and different ways (such as the pilot schemes developed in mathematics recently). Such work has delivered a healthy national suite of qualifications, in a system with multiple awarding bodies, through competition-driven innovation in curriculum research and development.

13. If the recommendations of the recent Mathematics Taskforce report<sup>12</sup> are implemented, a considerable amount of curriculum development work will be needed in the coming years. The Society concurs with the Taskforce's view that this should be led from within the mathematics community rather than by a government agency.

## 2. How to ensure accuracy in setting papers, marking scripts, and awarding grades?

14. It is the Society's view that current problems with setting and marking examinations and fixing thresholds will not be solved by reducing the number of awarding bodies. Other solutions need to be sought. An extensive discussion of these difficult issues can be found in a recent report from QCA.<sup>13</sup>

15. Current problems with accuracy in setting papers may have come about partly as a result of the wish of the awarding bodies to streamline their operations and so improve efficiency (ie not educationally driven); this has resulted in some cases in dispensing with what has subsequently turned out to be essential proof reading checks. In our view current mechanisms to ensure the accuracy of papers are not as effective as they could be.

16. Marking of examination papers in mathematics is moving towards on-line marking. The Society recommends a review of this process as there is little evidence currently that this development has improved accuracy (or validity) in marking scripts.

17. Currently all GCSE Mathematics specifications are required to conform to the pattern of two tiers only. Additionally, there has to be an overlap of C grade in the two tiers so that all candidates are being assessed in a tier where a C grade is possible. This has three negative effects:

- (i) there are a significant number (well over a quarter) of candidates for whom a C grade is likely to be always beyond reach. Forcing such candidates to sit a paper in which some if not most of the paper is inaccessible cannot be a positive experience;
- (ii) there are, likewise, a significant number of candidates who will obtain A or A\* grades (about one sixth). For them being made to sit papers in which a proportion of the work is possibly trivial is also not helpful to the process of differentiating ability; and
- (iii) the result of having to offer five grades at each tier means that a potential C grade candidate cannot access a large proportion of the papers. For example, currently, at the higher tier (with grades A\*, A, B, C and D), 50% of the marks have to be available to grade C candidates, but this causes a reduction in the amount of differentiation for the most able within a tier. This can only be resolved by allowing Awarding Bodies to develop specifications which are not constrained by the need for all subjects to conform to the same rules.

18. There are other issues which the Society would like to draw to the attention of the consultation committee, loosely connected to the question. Mathematics, and within this, statistics, forms part of the National Curriculum and is taken by all pupils up to age 16. The unique nature of the subject needs to be recognised and understood.

19. A particular concern of the Society is the rule that all units can have only one mode of assessment. This prevents work in which students collect and analyse their own data from forming part of the assessment of a statistics unit; in practice this means that such work, which lies at the heart of statistics, is rarely done. It must be made clear to curriculum developers and to regulators that not all subjects can be processed through the same filter and/or be subject to all the same rules of examination and assessment. OFQUAL (and its predecessor bodies) has closed down valuable qualifications because they do not fit the regulatory rules of the day. OFQUAL should not be seeking to process subjects through a "one size fits all" filter when it comes to accrediting qualifications and ensuring that they represent reliable and consistent levels of attainment. This approach by OFQUAL has already:

<sup>12</sup> Vorderman, C, Porkess, R, Budd, C, Dunne, R, Rahman-Hart, P (2011). *A world-class mathematics education for all our young people*.

<sup>13</sup> Newton, P, J Baird, *et al*, eds (2008). *Techniques for monitoring the comparability of examination standards*. Qualifications and Curriculum Authority, London.

- Discounted new and relevant qualifications such as the planned GCSE Use of Mathematics (aimed at post-16 students) which OFQUAL did not approve as a GCSE in 2010 as it did not match statutory regulations.
- stopped a proven-to-be-successful model of assessing GCSE mathematics via a combination of examination and coursework as part of learning. Similarly, OFQUAL has indicated that at the next revision of AS and A2 Mathematics specifications any unit (or module) may have only one mode of assessment; thus a Mathematics/Statistics unit may be 100% examination or 100% coursework (or controlled assessment) but it may not contain a mixture. Similarly, successful units containing significant amounts of numerical analysis that have used computers are to be stopped. It is a concern that there is now almost no coursework option offered in any GCSE, AS or A2 unit in Statistics. Neither is there the possibility of using technology and the rich software it offers in assessment regimes for mathematics or statistics. This means that young people are already going on to further or higher education or work with no experience of, for example, handling real data in context, solving problems which are relevant to themselves or to employers.

*3. Thoughts about the commercial activities of awarding bodies, including examination fees and textbooks and their impact on schools and pupils?*

20. In our view the commercial impact of Awarding Bodies should be examined. In the interest of developing high-quality textbooks some of the current practices, such as using examination board branding or examiner's names on textbooks should be reviewed. It is clear this practice gives these textbooks a commercial advantage over other textbooks, which may be of an equal or better quality but do not have the branding power of an examination board behind them. It is clear there are many talented textbook authors who deliver high quality teaching materials and their innovative contributions should be encouraged in an open market.

November 2011

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### **Written evidence submitted by the Joint Council for Qualifications (JCQ)**

#### **ABOUT JCQ**

1. The Joint Council for Qualifications (JCQ) is a membership body comprising the seven largest national awarding bodies offering qualifications in the UK. These are AQA, CCEA, City & Guilds, Edexcel, OCR, SQA and WJEC.

2. The JCQ exists to provide:

- (a) An opportunity for strategic debate, information exchange and expression of common interest amongst awarding bodies.
- (b) A means to enable the awarding bodies jointly to express views on, and respond to, national issues as they arise.
- (c) A vehicle for collective approaches, where relevant, to government, political and other influential parties.
- (d) A means of collective discussion with teachers, their organisations and other valued stakeholders, on matters of common concern.
- (e) Common administrative arrangements for schools and colleges.

3. Its members cover a range of qualifications that include: Entry Level; GCSE; Diplomas; GCE; Advanced Extension Award; Vocational; Extended Project; Scottish Highers; Basic and Key Skills and Functional Skills.

#### **OVERVIEW**

4. This submission provides an overview of the examination system in the UK, the role of awarding bodies, and information relating to the errors in this year's examination papers. It supports submissions made separately by some of JCQ's members. The JCQ does not enter into discussions of awarding bodies' commercial activities.

#### **THE SCALE OF THE EXAMINATIONS SYSTEM**

5. The public examination system is a vast and highly complex operation deploying some of the nation's best educational expertise in an intensive period to produce results across a range of qualifications.

6. Each year, it employs over 50,000 examiners who mark over 25 million separate examination scripts and pieces of coursework. Awarding bodies set over 60,000 examination questions each year and issue over two million GCE results and around six million GCSE results.

7. Students have a choice of more than 70 different subject titles at both GCSE and AS/A-level as well as a range of vocational and Entry Level subjects. In most subjects there is a choice of syllabus or specification and a choice of content. This provides the opportunity for innovation, centre choice, and competition between awarding bodies to meet the needs of centres, learners, universities and employers.

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## THE ROLE OF AWARDING BODIES

8. Awarding bodies have a wide range of roles and responsibilities. At a basic level they:

- (a) *design syllabuses*—which are descriptions of what skills, knowledge and understanding are required in a particular course. This is often done in collaboration with education partners such as Salters Foundation, Nuffield Foundation, Institute of Physics, Schools History Project, and universities;
- (b) *write examination questions and develop mark schemes*—which are based on the whole course and are set at a range of different levels of difficulty. This process starts nearly two years before the examination is taken and involves a large number of specialists including chairs of examiners, chief examiners, principal examiners, revisers and scrutineers; and
- (c) *mark, grade and award qualifications*—which involves a huge logistical operation to gather completed scripts, get them marked by examiners and then sent to awarding bodies for the awarding process and then grading. All of this is completed in a 12 week window from the date of the first examination to the publication of results for all examinations. The examinations themselves take place in the first half of this period.

9. Awarding bodies undertake much more than these core activities. They provide training for teachers, give a huge amount of administrative support to centres, invest in improving the use of technology, deliver innovation to the system and the qualifications, and carry out important research, all with the aim of developing and improving the UK's examination system.

## ENSURING ACCURACY IN SETTING PAPERS, MARKING SCRIPTS AND AWARDING GRADES

10. Awarding bodies understand that accuracy is essential in delivering a successful world-class examinations system that has the confidence of all stakeholders.

11. Detailed and well-tested procedures are in place to eliminate errors that may occur and ensure standards are maintained in what is a long and complex process that relies on human input and judgement.

12. This year saw too many major errors appearing on examination papers. Awarding bodies deeply regret these errors but were able to react swiftly to ensure students were not disadvantaged.

13. Awarding bodies undertook their own investigations into the errors, which found that there was no systemic failure of the examination system. The number of major errors reported in 2011 represented an unusual cluster of unrelated errors appearing in one year with a separate explanation for each individual error.

14. The investigations did highlight areas in which awarding bodies can make improvements to their own processes to minimise the risk of mistakes and these are being implemented.

15. Such a large and complex system that has human involvement will always carry an element of risk. The UK examinations system does operate to a very high standard with an extremely high level of accuracy, but further improvements are being made to prevent a repeat of 2011 and so that confidence can be restored.

16. An example of how awarding bodies ensure standards are maintained is by undertaking statistical screening each year, which comprises a *post hoc* analysis of how statistically aligned the results for awarding bodies' specifications in a subject were. The method compares specification outcomes, adjusted to take into account any difference in the ability of their entry cohorts. Those measures of ability for GCE and GCSE specifications are derived respectively from candidates' mean prior and mean concurrent GCSE score. In the event of any unexplainable misalignment, remedial action is recommended for the following year.

## CONCLUSION

17. The current set-up allows and incentivises innovation in the development of qualifications and the system as a whole, within a regulated framework. It provides a broad choice for learners and schools and colleges.

18. The UK examinations system is large and complex. There are processes in place to ensure accuracy and that standards are maintained. The errors on examination papers this year are not a consequence of a fault in the system, but a series of unrelated mistakes appearing in one year. The processes and procedures employed have been scrutinised by awarding bodies and changes are being made to further minimise the risk of errors occurring again in the future.

## Further written evidence submitted by JCQ (Annex A)

### ROLE AND REMIT OF JCQ

Thank you for letter of 8 February 2012 regarding the role and remit of the Joint Council for Qualifications. I trust the information given below provides you with what you require.

### ABOUT JCQ

The JCQ is a membership organisation that brings together and represents the collective voice of the seven largest providers of qualifications in the UK—AQA, CCEA, City and Guilds, Edexcel, SQA, OCR and WJEC. Together, these awarding organisations offer GCSE, GCE, Principal Learning, Project, Entry Level, Scottish Higher, Vocational and vocationally related qualifications.

In the main, the JCQ's work to develop and publish common guidance for examinations relates to General Qualifications, which are the focus of this letter.

The JCQ was established in January 2004. It is a registered charity and its activities are not for profit. It employs five staff and its work is overseen by the Chief Executives Forum drawn from its membership. Its Chair is nominated from this Forum and the post is held for six months.

Its key roles and activities are to:

- ensure standards are maintained between awarding bodies;
- provide a collective position on technical issues including awarding and moderation;
- publish, each year, results for GCSEs, GCEs, and other national qualifications;
- help member awarding organisations work together to create common examination standards, regulations and guidance;
- help member awarding organisations regulate themselves against those agreed standards as well as monitoring any exceptions;
- respond collectively, where possible, to consultations and requests from regulators, Government and other stakeholders;
- provide a forum for members to discuss issues with each other, partner organisations and the regulators; and
- ensure examinations are sat under consistent regulations.

Much of the JCQ's work on data and standards, as well as work on other common technical issues, is undertaken by its Standards and Technical Advisory Group (STAG). For example:

#### *Statistical screening of General Qualification grades*

Each year, a *post hoc* analysis of how statistically aligned the results for awarding organisations' specifications in a subject are, is undertaken. The method compares specification outcomes, adjusted to take into account any difference in the ability of their entry cohorts. Those measures of ability for GCE and GCSE specifications are derived respectively from candidates' mean prior and mean concurrent GCSE score. In the event of any unexplainable misalignment, remedial action is recommended for the following year.

#### *Entry, Aggregation and Certification Rules for GCE and GCSE*

These rules have been developed so that entry requirements, aggregation processes and certification are common across all awarding organisations and to ensure there is a standard interpretation of Ofqual's criteria governing these qualifications. The GCE rules also cover the transfer of credit mechanism for AS qualifications between awarding bodies.

STAG is an important link between awarding organisations and the regulators and its members are part of the regulators' Standards and Technical Issues Group (STIG).

### *Areas covered by JCQ's guidance on examinations*

To reduce bureaucracy, deliver a coherent and fair examinations system, and to make life easier for schools, colleges and training providers, the JCQ has developed a series of regulations, advice and guidance on examinations for General Qualifications. These are:

#### *General Regulations for Approved Centres*

These regulations set out the responsibilities of awarding organisations and centres for the delivery of qualifications. They also detail the requirements awarding organisations place on a centre in order to become recognised as an examination centre.

#### *Instructions for conducting coursework and Instructions for conducting controlled assessments*

These two sets of instructions detail the procedures for the administration of coursework and the administration and running of controlled assessments.

#### *Instructions for conducting examinations*

To ensure a level playing field for all candidates, the JCQ has developed procedures for the administration and running of examinations that all centres must adhere to.

*Regulations and Guidance—Access Arrangements, Reasonable Adjustments and Special Consideration*

This document sets out the criteria for the various access arrangements which are the manifestation of the application of reasonable adjustments to assessments. The booklet is produced in consultation with the regulators in England, Wales and Northern Ireland and disability groups.

*Post Results Services*

As part of delivering a transparent examination system, the awarding organisations provide a Post Results Service that allows centres, on behalf of their students, to request different levels of checks on examination scripts including reviews of marking. This document provides a common set of principles which are derived from Ofqual's Code of Practice so that services and arrangements are uniform across awarding bodies.

*Appeals*

A common set of procedures has been developed by the JCQ to deal with appeals against awarding body decisions.

*Malpractice*

To ensure a standard approach to handling instances of candidate, teacher and centre malpractice or maladministration, a common set of procedures has been developed.

In addition to the regulations outlined above, the JCQ issues a set of standard IT formats so that examination entry and results information shared electronically between awarding bodies and centres and awarding bodies and institutions, such as UCAS and the Department for Education, is uniform. These standard formats are implemented by MIS suppliers in their software packages they supply to examination centres.

The JCQ maintains a list of gradesets that can be used in the awarding of qualifications. These gradesets set out the ranges of grades that may be awarded in particular qualifications. For example, the gradeset for GCSE is A\* to G. In all there are 45 different grading scales, not all of which are still in current use.

The JCQ constructs a common timetable for each examination series in the calendar year to keep clashes to an absolute minimum. There are over 70 different GCSE and GCE subject titles which need to be accommodated in the timetable. To accompany the timetable, it publishes set of key dates which provide centres with deadlines for activities associated with the examinations process, for example, when they need to have entered all their candidates for examinations and when access arrangements need to have been submitted.

Following the closure of the Qualifications and Curriculum Development Authority, the JCQ has assumed responsibility for Access Arrangements Online. It is through this system that centres make applications for access arrangements (for example extra time, the use of a scribe etc). It ensures that all candidates receive the same treatment across all examinations irrespective of the awarding body they are taking the examination with.

*Who decides which areas your guidance/rules cover and how, and where the impetus for additions/amendments to your guidance/rules comes from*

The awarding bodies collectively, through various committees and groups, agree the areas to be covered by common guidance and regulations and how they should be implemented. The impetus for change can come from a wide range of sources including a change to the regulatory criteria, a change in legislation, discussions with representative bodies such as disability groups, or a change in working practice within awarding organisations.

*Whether there are any trends related to the guidance/rules you issue (for the example, on the use of calculators and on extra time). On extra time, it would be helpful if you could tell us why the number of requests approved increased between 2004–05 and 2008–09*

The regulations on the use of calculators stem from Ofqual and the various sets of subject criteria they issue.

Extra time in examinations was delegated to centres in 1998. With the introduction of Access Arrangements Online, it has been reunited with the other access arrangements. Between 2004–5 and 2008–09 online tools were introduced to allow for the electronic processing of access arrangements. Intensive training of exam officers to utilise these online tools raised awareness of the requirement to record applications for extra time.

In September 2007, the DDA 1995 was extended to general qualifications. The impact of the DDA on general qualifications, when dyslexia was ruled to be a disability, has played a significant part in the escalation of approvals over the period 2004–05 to 2010–11. JCQ has been endeavouring to strengthen the regulations for extra time but is conscious that it must remain within the requirements of the DDA. In all of these matters the regulator is consulted and provides advice.

### *How the JCQ is funded*

The JCQ is funded from subscriptions from its members. It has a very small income generated from royalties and the provision of data (in the region of £12k per annum).

### *Whether the work of the JCQ is regulated and if so, by whom and how*

The JCQ is a not-for profit charity and is not regulated although it does work closely with the regulators in England, Wales and Northern Ireland. All of the JCQ's members, however, are regulated.

February 2012

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## **Written evidence submitted by DRS, Data Services Limited**

### EXECUTIVE SUMMARY

This submission presents the case for multiple Awarding bodies in England on the basis that it encourages innovation which results improved quality, standards and efficiency. This document demonstrates that through the use of innovation, (ie online marking of examination of scripts) marking quality has been improved, marking efficiency has been increased and costs driven down. This innovation should be encouraged to track the complete assessment process from examination creation to awarding in support of the human endeavour and reduce the opportunity for errors.

### INTRODUCTION TO DRS

Established in 1969 and publically listed in 1993, DRS has over 40 years of experience in providing technology based, assessment services to the Education sector both in the UK and overseas. DRS has won both the Queen Award for Export and Industry Awards for its scanners.

As a pioneer of online marking solutions at the start of the last decade, DRS e-Marker® offers a variety of modular and scalable electronic marking services for awarding and professional bodies.

DRS has provided online marking solutions to all the UK unitary awarding bodies during its history and this summer provided services to the Northern Ireland awarding body, CCEA (Council for the Curriculum, Examinations and Assessment), the Welsh awarding body (WJEC/CBAC) and the English awarding body AQA (Assessment and Qualifications Alliance) making it the most used system by script volume during 2011. DRS is now engaged in taking this solution overseas where it has run a number of successful pilots in Africa, Malaysia and the Caribbean.

Based in Milton Keynes DRS employs 200 core staff.

### RESPONSE

#### *The advantages of multiple awarding bodies*

(1) The question of whether there should be a single, national examination board in England has arisen before. The arguments against such a step are as follows:

- Competition drives innovation, quality and continuous improvement.
- Competition provides customer choice.
- National Bodies tend to be risk averse and their rate of change towards greater efficiencies and improvements is slower.
- National projects do not have a good track record in delivery.
- Administrative errors occur in both models but a progressive system is more likely to resolve issues more quickly.
- The move to a single body would be a complex and major exercise with no certainty of positive change.

#### *How to ensure accuracy in setting papers, marking scripts, and awarding grades*

(2) In order to demonstrate how to ensure accuracy in setting papers, marking scripts and awarding grades, it is necessary to summarise the examination process. This process for unitary awarding bodies marking scripts physically is shown in Appendix 1.

### MARKING SCRIPTS PHYSICALLY

(3) *Steps 1–5* are associated with the creation of the examination paper, its secure printing and distribution to the Examination Centre by the Awarding body.

(4) *Step 6* Once the examination is sat the Centre send the scripts directly to particular markers who will mark that subject from that centre.

(5) *Step 7* does not exist.

(6) *Step 8* Before they can mark the scripts the markers must attend a Standardisation meeting where the markers are trained and tested on the mark scheme for each of the questions in the subject script. These meeting is booked for a particular day and hosted in a facility which has been hired for the purpose. Payments are made to the markers for subsistence, travel and loss of salary.

(7) *Step 9 & 10* Markers then start to mark the scripts “live” and they select a fixed sample and send this back to the awarding body for quality checks to be carried out on the markers work. Costs are incurred in packaging up these scripts and posting them back to the Awarding Body.

(8) *Step 11* A repeat of Step 10. A further sample, selected by the marker, of representative work for the Awarding Body to assess. Costs are the same as in Step 10.

(9) *Step 12* Meanwhile the awarding body must manage the progress of marking with a limited view of what is happening with the thousands of markers working for it. Scripts will inevitably need to re-shipping from one marker to another for a variety of reasons—this cost time and resource.

(10) *Step 13* The marker finishes their allocation and ships all the remaining scripts back to the Awarding Body. Cost of shipping.

(11) *Step 14* The Awarding Body then carry out a series of checks on all the scripts, such as checking the addition of the marks that the markers have made, the transposition of marks from the body of the script to the front page and then enter of the marks into the Awarding Body Examination Processing System. Temporary staff are taken on to carry out this task on the millions of scripts.

(12) *Step 15* Senior Markers then sample scripts from each marker separately to discern whether the marking has been conducted at the appropriate quality level and analysis is carried out on the marks to assess whether the marker has been generally too lenient or harsh. Scripts can be remarked completely or adjustments made to the marks if the marking is found to be below standard. This can be a costly exercise and resources are needed as the awarding date approaches.

(13) *Step 16* For the awarding meeting, scripts totalling a certain mark must be found for each subject to assess where the grade boundary is. Finding a significant sample of scripts with a particular mark in a range of marks can be time consuming.

(14) *Step 17* Throughout this process the awarding body must have sufficient storage for millions of scripts that allows quick and easy access.

(15) *Step 18* Once the Award is made a percentage of candidates will question the grade they have been given and will ask for the script to be re-marked. This is called Enquiries about Results and generally requires the repeating of steps 14 and 15.

#### MARKING SCRIPT IMAGES

(16) Quality improvements and cost savings can be made by awarding bodies if they move from physically marking the scripts to marking images of the candidate’s responses online through an electronic marking service such as e-Marker® from DRS.

(17) Briefly the Examination Centres send all the scripts directly to the service provider who checks them in reconciling the candidate enrolments against the received scripts. The scripts are then scanned and images held in secure hosted facility. Markers are then able to attend their Standardisation meeting online and once they have passed the quality measure they are allowed to mark candidate responses live. Because the candidate responses are images, they can be segmented into itemised responses. This means that a marker can be allocated to only mark Q2, whilst another marker marks Q3. This brings a number of benefits but the key one is marker quality. This comes as result of marking opinion being spread across a particular candidate script (not reliant on a single marker) and a consistency of marking that comes as a result of working on one question type for a period of time. The biggest quality gain comes from the ability to apply a quality methodology that checks the marking quality of the marker as they are marking. This means that adherent marking can be spotted early and action taken. This then leads to the marks at the end of the process being reliable and fair, negating all the post mark checks normally carried out.

(18) The process when using an electronic Marking solution is shown in *Appendix 2* which highlights areas where quality improvements, service improvements and cost savings are made.

(19) *Steps 1–5* do not change.

(20) *Step 6* the examination centre now sends all scripts to one address where the scripts are scanned. This more efficient, less prone to error, reduces shipping costs and is much simpler to administer.

(21) *Step 7* The scripts are scanned.

(22) *Step 8* Markers are standardised online. This is a major cost saving and means that the markers can conduct the standardisation at a time when it is convenient to them.

(23) *Step 9* Markers are then able to mark online the candidate question responses live (such as Question 2), that have been allocated to them. There is no need to limit the number of items that the markers can mark and when they mark an item, Q2, a new one is randomly selected from the pool of Q2s. The items are totally anonymous.

(24) *Step 10* During marking the markers are automatically checked for quality of marking without the marker being aware.

(25) *Step 11* This step of self selection of scripts for quality checking purposes is no longer required.

(26) *Step 12* The Administrators have a full picture of the marking progress.

(27) *Step 13* The requirement to ship scripts back to the awarding body is no longer required.

(28) *Step 14* The requirement for the awarding body to carry out a series of checks all the scripts is no longer required.

(29) *Step 15* Marking review is no longer required.

(30) *Step 16* Instead of having to physically retrieve scripts with the correct total mark for the Awarding Meeting this can all be done by selecting the images of candidates with the required marking through the electronic Marking system.

(31) *Step 17* Storage is no longer required by the awarding body. Scripts can be securely destroyed after the Enquires about Results stage as the images are available if required.

(32) *Step 18* Enquiries About Results is a much simpler process as the candidate's script can be retrieved as an image for a marker to remark.

(33) *Step 19* During the Electronic Marking process data is gathered that was never available during physical marking of scripts. This allows much more detailed analysis of exam and candidate performance:

- The benefits of marking from images of scripts are as follows:
  - improves marking quality;
  - makes more efficient use of the marker workforce;
  - removes any bias from marking;
  - enables the remote training of markers (Standardisation);
  - allows the anonymity of candidates;
  - improve administrative visibility;
  - provides enhanced management information; and
  - allows for more progressive approaches to assessment.

(34) Steps 1–3 cover the process of creating an examination paper from scratch. These steps can be integrated into the electronic marking system with the following benefits:

- Managed workflow with full audit trail reducing the possibility of errors.
- A single, continuous system from examination creation through to grade awarding.
- Data gathered early can be used later creating a more efficient system.

(35) Rather than reduce the English awarding bodies down to one organisation and destroy what makes them successful and distinctive potentially one might remove areas where there is duplication of activity between the awarding bodies. Some of these areas of duplication are:

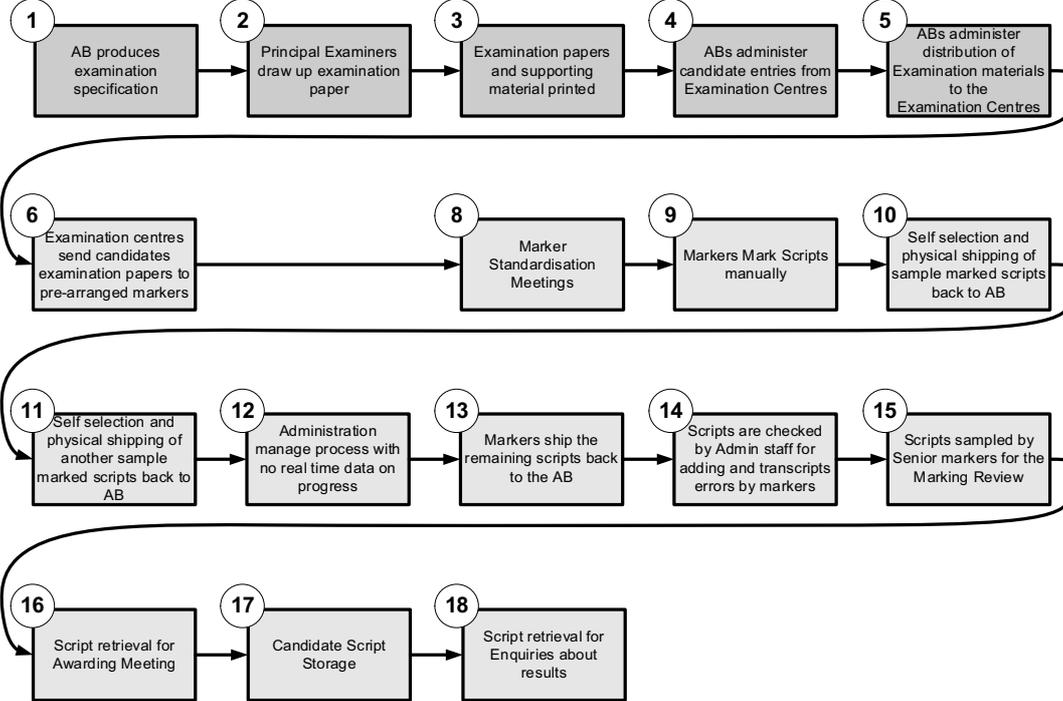
- *Examination Processing System.* This is the backbone of the Awarding Body. It manages the receipt of candidate entries, Centre details, Examiner details and payments. It holds the mark data and manages the awarding and enquires about results process. This system is unique to the Awarding Body and as such there are no commercial systems that meet the scale of requirements of an English Awarding body. Developments costs are considerable and the efficiency gains in sharing such a system are trivial.
- *Assessment Processing System.* This system undertakes the marking of scripts and the management of the markers undertaking the exercise. All three awarding bodies use a different system but each share broadly the same principles, in that they all mark from image. There would be some efficiency gains by utilising one system across all three awarding bodies as well as a commonality of standards.
- *Scanning process.* Each Awarding body scans their scripts to provide images for their marking system. There are efficiency gains in using one scanning facility, but to maximise the benefits each awarding body should also utilise the same examination paper formats.

## RECOMMENDATIONS

(36) In order to encourage innovation that will increase quality, improve standards and reduce cost the key recommendation is to create a regulatory framework that will allow it. Multiple Awarding bodies support this case, not undermine it.

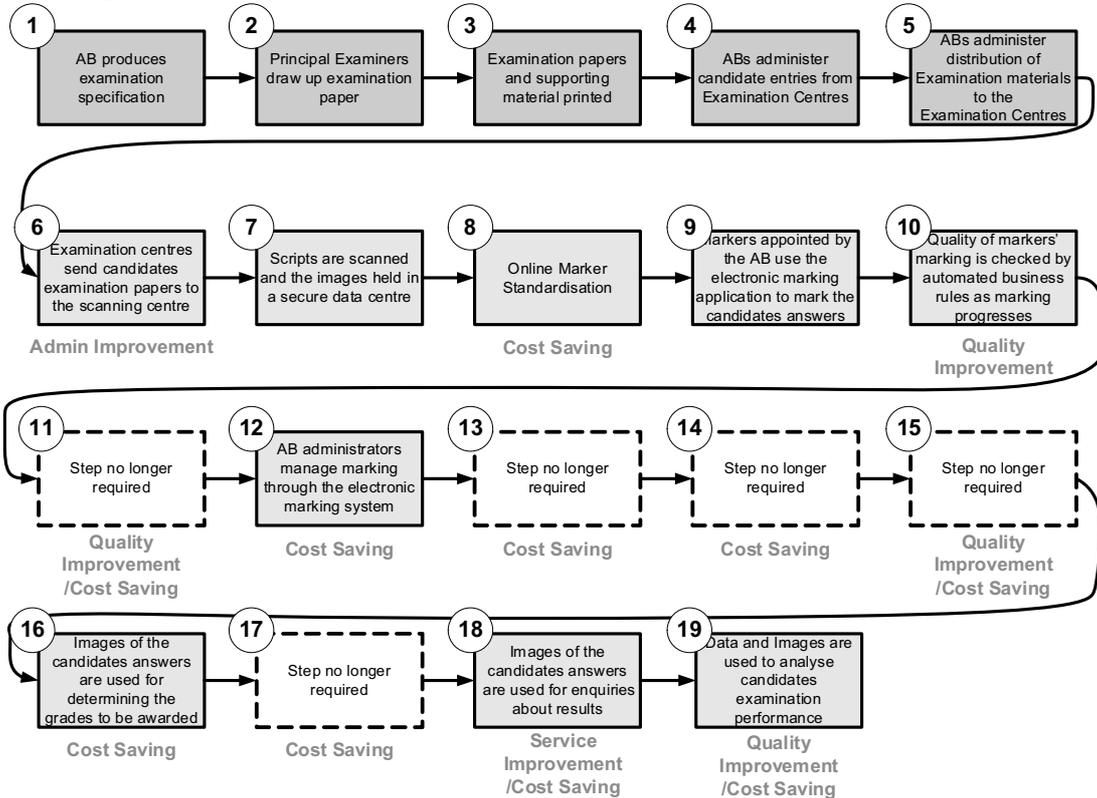
### Appendix 1

#### Marking Scripts Physically



### Appendix 2

#### Marking Script Images (e-Marker®)



## Written evidence submitted by the Chartered Institute of Educational Assessors (CIEA)

### SUMMARY

1. The Chartered Institute of Educational Assessors (CIEA) is pleased to provide evidence to the Committee's inquiry.
2. We believe that improvements to the management and practice of assessment can bring about greater reliability.
3. The introduction of pre-testing at item level would overcome many of the shortcomings of the current system.
4. Any changes should be accompanied by appropriate external professional training and accreditation.
5. Successive governments have accepted expert recommendations in respect of assessment (2009) and the inclusion of assessment in teacher standards (2011).
6. The development and support by the CIEA of a national network of Chartered Educational Assessors provides access to assessment experts who can support the changes we recommend.

### THE CHARTERED INSTITUTE OF EDUCATIONAL ASSESSORS

7. The Chartered Institute of Educational Assessors is a professional body dedicated to supporting the needs of everyone involved in educational assessment.
8. Our primary concern is with the quality, validity and reliability of assessments and examinations.
9. Our members include senior examiners, moderators and markers and individuals with an interest in or responsibility for assessment in primary schools, secondary schools, colleges, universities, training centres and other educational organisations. We provide training and support at each stage in the assessment process and individual accreditation against the national CIEA Professional Framework.
10. To date the CIEA has awarded Chartered status to 160 of the country's most experienced educational assessors. We continue to develop this network as a national resource to support improvements in assessment policy and practice.

### THE NUMBER AND RANGE OF AWARDING BODIES

11. The CIEA's view is that the number of awarding organisations is less important than the quality of the processes they apply. The robustness of assessment should be consistently high and not in itself a market differentiator between different organisations. It is difficult to see how a move to a single national body would stimulate the improvements that are needed in assessment practice.

### ENSURING ACCURACY

12. A number of changes to practice would improve the accuracy of papers and thus the reliability of student outcomes.
13. The CIEA has recommended to Ofqual that Awarding Organisations be required to pre-test all general qualifications, including GCSEs, A levels and Diplomas. This can be done at item level, which would reduce the time commitment for schools and the 16 and 18 year olds attempting each item, and allow each Awarding Organisation to develop a bank of items in any specific subject for use in future papers.
14. The data obtained by pre-testing will allow the reliability of each item to be established before the assessment goes live. It will allow the Awarding Organisations to determine the particular items that best discriminate amongst the cohort being assessed and establish the validity of each item.
15. Pre-testing will also allow the Awarding Organisations to pre-determine grade boundary scores and to calculate the risk of error before the examination is taken.
16. The introduction of pre-testing at item level would require a change in the way that examinations are set. At present the chief or principal examiner sets an entire paper. Under the arrangements proposed by the CIEA teams of people would write a variety of items for one paper, thereby developing a bank of items that can be used for any one qualification. Awarding Organisations will need to engage appropriately trained and qualified staff to undertake this work.
17. There is a need for greater transparency and support for the role of scrutineers. Currently it is not clear who carries out such scrutinies, only that a scrutineer has been used. The CIEA recommends that scrutineers are named and their assessment qualifications published.
18. The CIEA's view is that training and accreditation should be provided by an external organisation.

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## THE ROLE OF THE CHARTERED EDUCATIONAL ASSESSOR (CEA)

19. The importance of accurate assessment has been recognised in the new teacher standards that will come into force from September 2012.

20. In 2009 the then Secretary of State accepted the recommendation from the Expert Group on Assessment that all schools should have access to a Chartered Assessor by 2020. While that deadline is still some time away, the continued expansion of a network of Chartered Educational Assessors(CEA) will improve reliability.

21. The CIEA has collected a number of case studies describing the interventions and impact of CEAs. These are available on the CIEA website.

22. The role of the CEA is to quality assure the assessment processes that a school, college or workplace use. The CEA will look to improve the processes of assessment common to all institutions, across multiple disciplines or subject contexts. This will involve ensuring that the preparation for assessment is effective, auditing assessment policies and procedures that are in place and how the strategy for assessment is delivered. The CEA will offer support in designing and developing effective assessments that are reliable, valid, fit-for purpose, manageable and fair.

23. The CEA will also look to improve the way that assessments are conducted. This will involve developing effective assessment criteria and setting suitable assessment objectives as well as arriving at consistent and accurate judgements. This includes developing effective standardisation and moderation procedures, as well as collecting and analysing assessment information from the outputs of these assessments.

24. Further, the CEA will look at ways of using this information to inform future teaching, training and learning programmes, as well as reviewing the effectiveness of the assessment itself. The evidence will be used to provide feedback to learners as well as members of the assessment teams, their line managers and stakeholders and to review the impact of the assessment.

25. The information will also form the basis of the next teaching or training programme as well as providing data which can be used to write reports for parents or carers, for institution managers and for other stakeholders such as local or national government as well as local and national industry.

26. The CEA will also encourage teams of assessors to reflect upon their individual performances, use assessment information to help individuals to plan their own professional development, by addressing any areas for development highlighted by the evidence, and evaluate the impact on their own learning in these key areas.

## COMMERCIAL ACTIVITIES

27. The CIEA does not feel qualified to offer opinions on this element of the inquiry.

*November 2011*

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## Written evidence submitted by the Federation of Awarding Bodies

### EXECUTIVE SUMMARY

The Federation of Awarding Bodies believes that teachers and their learners are best served by allowing a competitive market to operate, subject to rigorous independent regulation by Ofqual and, in the case of GCEs and GCSEs, to common qualification and subject criteria. We agree that the aspiration should always be for error free examinations but this is a significant challenge given the thousands of questions that have to be produced each year. In relation to awarding body commercial activities, FAB believe that these properly support the teaching and learning associated with the qualifications and therefore are seen as beneficial by teachers and learners.

### INTRODUCTION

1. The Federation of Awarding Bodies is the trade association for vocational awarding bodies with over 130 organisations in membership ranging from large generic awarding bodies to those working in specific occupational areas, including professional bodies. Our members provide vocational qualifications to the full range of providers—employers, training providers, schools and colleges. We do not seek to represent their interests in relation to academic qualifications—GCEs and GCSEs—which is a role taken by the Joint Council for Qualifications (JCQ). Although the focus of the Select Committee’s inquiry largely falls outside the Federation’s area of work, we have an interest in the Committee’s deliberations and wish to make the following submission for your consideration.

### THE ARRANGEMENTS FOR AWARDING BODIES IN ENGLAND

2. When considering the number of awarding bodies delivering General Qualifications to 15 to 19 year olds, the arguments for healthy competition will often be countered by concerns about the consistency and level of quality standards. The Federation believes that the qualifications industry should be as open and competitive as any other and that the well rehearsed benefits of competition should be made available to customers in this

market. Equally we acknowledge that this is a market where the products—the qualifications—are critically important for individual learners, for the schools and colleges, for employers and ultimately the Government and, as such, we accept that independent regulation by Ofqual provides a necessary oversight of the awarding bodies operating in this market.

3. As the Department for Business, Innovation and Skills (BIS) states: “competitive markets provide the best means of ensuring that the economy’s resources are put to their best use by encouraging enterprise and efficiency and widening choice”. FAB believes that competition between awarding bodies is a driver of performance and innovation and delivers the theoretical benefits of competition in the qualifications industry which can be summarised as:

- *a discipline to keep costs down and keep prices low*: an example of this is the fact that awarding bodies absorbed the cost of moving all their qualifications to the Qualifications and Credit Framework (QCF) which ran into tens of millions of pounds rather than pass this cost through to schools and colleges
- *greater use of technology to provide improvements*: we have seen this both in qualification and assessment design and in awarding bodies interaction with their customers, as demonstrated by significant investments in web-based tools and developments such as faster handling of examination scripts
- *a high level of quality of service and support* (including after-sales service) : shown by the substantial amount of free support and training made available on-line and face-to-face to teachers and other staff by awarding bodies
- *the availability of a variety of products providing choice*: While the General Qualifications have to be developed to defined subject and qualification criteria, awarding bodies translation of these into qualifications provides a choice of approaches that allows teachers to purchase the qualifications and associated support that best suits their own teaching expertise and style and the interests and learning styles of their pupils.

4. The Federation believes that the principles of quality of content and assessment, consistent standards, cost effectiveness and accountability, quality of service and choice remain central to qualifications and that these continue to be delivered by having an element of competition offered by having three major awarding bodies operating in England.

5. At a time when the Government’s expressed intention is that the National Curriculum review should lead to a slimmed down curriculum with the ability for schools to “have greater freedom to construct their own programmes of study”, we believe that this freedom would not be effective if there were to only be one specification for each subject at GCE and GCSE.

6. It is clear that teachers and their managers value choice and many exercise their ability to switch awarding bodies when new GCE and GCSEs are developed and, to a more limited extent, between the main changes in specification. The three awarding bodies compete vigorously for these markets, ensuring that a full range of support material is available to support teachers and others who adopt their version of the GCSE or GCE.

7. The Federation believes that it would be useful for the Select Committee to explore the ways in which staff in schools and colleges make their decisions about purchasing qualifications. In our experience this is a complex decision making process involving a number of factors including the content of the specification, the support material available, the training provided by the awarding body, the customer service offered and the price.

8. FAB acknowledges that an open competitive market in such a critical area as education should be subject to strong independent regulation which is now in place with the establishment of Ofqual. They have a remit to regulate awarding bodies and in order to ensure that:

- (i) regulated qualifications give a reliable indication of knowledge, skills and understanding, and indicate a consistent level of attainment;
- (ii) regulated assessment arrangements are developed and implemented which give a reliable indication of achievement and indicate a consistent level of attainment;
- (iii) public confidence in regulated qualifications and regulated assessment arrangements is promoted;
- (iv) there is the promotion of awareness and understanding of the range of regulated qualifications available and their benefits; and
- (v) regulated qualifications are provided efficiently and in particular that any relevant sums payable to a body awarding or authenticating a qualification in respect of which the body is recognised represent value for money.

9. These objectives are far-reaching and will act as a powerful limitation on any perceived drift towards any of the more unhealthy aspects of competition, including downward pressure on quality and standards.

10. The use of technology to deliver improvements and efficiency has been released in the qualifications industry with the introduction of improved services to schools and colleges and their learners. These range

from the electronic data exchange to the release of results on-line, from techniques to speed up the handling of scripts to the level of feedback on performance offered to teachers.

11. The Federation questions whether a single national examination board would have the incentive to invest in these ground-breaking technological advances and wonders whether these developments would be seen as a priority when competing for public money with all the other Government IT projects. Further if a single organisation were to be responsible for all the examinations in England this would concentrate the risk of a system failure with significant implications, particularly close to the results time.

12. When the possibility of moving to a single awarding body was considered in 1997 in the DfE consultation on “Guaranteeing Standards”, there was broad support at that time for a rationalisation of awarding bodies to the current three unitary bodies (this from having had some 20 Boards in the 1980s) but only 7% of respondents favoured a move to only one awarding body. The view was that choice and consistency of standards are the primary principles that should underpin the development and offer of qualifications. In 2002, Sir Mike Tomlinson stated that the evidence given to his “Inquiry into A level standards” indicated that these arguments were still valid and the Federation has no reason to believe that this situation has changed significantly since then.

13. The Select Committee has suggested that an alternative arrangement could be the “franchising” of examinations in different subjects to examination boards. We envisage that this would ensure fierce competition between awarding bodies in order to gain the contract(s) for each subject or groups of subjects at the time that they come up for tender. This might lead to downward pressure on fees initially and promote innovation when the contract is first awarded but there would be little incentive to continue this in the middle and latter years of any contract. The Federation also wonders who would contract manage this arrangement and how this would relate to Ofqual’s role as an independent regulator and whether this would result in additional costs that would have to be borne by the State.

14. In such a contract management approach, it would be open to the Government to limit the contract period, for example to two years, in an attempt to encourage the contract holder to continue to deliver the benefits seen in a normal competitive market. However in the qualifications market this has a number of disadvantages. These include:

- (i) the adverse impact on teachers and learners of a frequent change of contractor leading to changes in the qualification and associate support material and the lack of certainty for school and college managers when planning their curriculum offer;
- (ii) the lack of willingness of the contract holder to take on and put in place unforeseen changes that result from shifts in Government policy (such as the current year on year changes in some GCSEs) with the consequent added costs. Given that the contractor could not rely on regaining the contract when it was next issued, they would need to recoup any investment within the life of the contract and not over a longer time period as awarding bodies do now;
- (iii) the significant amount of work and associated cost for awarding bodies that is inherent in operating within a contract market and whether this would prove cost effective especially if there was a possibility of major change during the life of the contract (eg in the event of a General Election or if a major review into education was underway at the time of tendering. Similarly in relation to minority subject areas the costs may outstrip the potential income; and
- (iv) if the contracts were to be let for particular subjects eg History, it would not be possible for each awarding body to maintain the necessary experts over the period when they do not hold the contract for this subject. Therefore these experts would be either subject to TUPE or lost to the system at the point at which the contract moved to another awarding body.

#### ENSURING ACCURACY IN SETTING PAPERS, MARKING SCRIPTS AND AWARDING GRADES

15. FAB notes the Ofqual’s Interim report of their Inquiry into the Examinations Errors—summer 2011, states that they have found awarding bodies “already working hard to implement measures to improve the quality of examination papers both in the shorter and longer term. These measures include: further checks of papers; the recruitment of additional expertise in proof reading; the audit of external suppliers quality assurance processes and additional training for staff and examiners.” We are sure that Ofqual will do whatever is possible to ensure accuracy in the setting of examination papers in the future.

16. The Federation does question the extent to which the production of examination papers can be 100% error free. We agree that this should always be the aspiration but the sheer number of questions developed across the system (over 60,000 in General Qualifications alone) and the fact that these are developed by people rather than machines, would suggest that some errors are inevitable. It may be that we can collectively draw on some of the techniques that are used in other industries around this aspect, such as Human Error Rate Prediction, and link this to the use of appropriate quality systems to ensure that the error rate is as low as humanly possible. It would then be critical to have streamlined appropriate processes in place to a) identify any errors as early as possible, b) mitigate the effect of these c) communicate this clearly to centres and candidates and d) ensure that lessons are learnt and carried through to the processes in the future.

17. In relation to marking scripts and awarding grades in GCEs and GCSEs, Ofqual's regulation currently operates in a number of ways to oversee these processes. This includes the recent introduction of recognition of the awarding body as an organisation and the requirement for on-going compliance with detailed Conditions, which is in line with regulation in other regulated industries.

18. Additionally Ofqual is responsible for the standards as set out in the qualification and subject criteria, and they then approve (accredit) each awarding body to offer each qualification/examination which includes seeing sample examination papers and mark schemes and the full detail of their processes and systems. Ofqual staff will also attend a large number of the meetings that determine the awarding of the qualifications including the grades. Our colleagues who offer these qualifications will no doubt supply the Select Committee with more detail in this regard.

#### THE COMMERCIAL ACTIVITIES OF AWARDING BODIES, INCLUDING EXAMINATION FEES AND TEXTBOOKS, AND THEIR IMPACT ON SCHOOLS AND PUPILS

19. As General Qualifications have substantially larger learner numbers on each qualification than we see on vocational qualifications, the Federation is not in a position to comment about the commercial activities in relation to these qualifications or the business models that underpin them.

20. It is relevant to note that awarding bodies are all private organisations with the vast majority also being charities and, apart from a very few, those that are not charities operate as "not-for-profit" businesses. Awarding bodies make their decisions about providing material and textbooks that support teachers and learners following their specifications within this context. In the case of qualifications with smaller numbers of learners, commercial publishers do not usually have an interest in producing textbooks or other material, whereas the awarding bodies will see it as part of their total offer to the schools and colleges.

21. In relation to examination fees, Ofqual has a statutory responsibility to ensure that these represent value for money and have various regulatory powers in this regard. Through the criteria for recognition as an awarding body and the Conditions of Recognition, Ofqual has set out a number of requirements on awarding bodies that relate to the fees and the related interaction with schools and colleges, such as invoicing. The Federation believes that this regulation is more than adequate to protect providers and learners.

November 2011

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#### Written evidence submitted by Vicky McCarthy

- One board could run one academic science specification and one vocational science specification for GCSE. This would reduce the entire checking etc which takes place now to establish parity between boards.
- The way in which internal assessments are moderated is different for different boards. For example, Edexcel specifies particular students work required for moderation prior to the marks being submitted, whilst OCR and AQA choose work to be moderated after all marks are sent to the board. This system is advantageous to teachers of Edexcel candidates.
- A "C" grade at BTEC is not the equivalent of a "C" grade at GCSE, and this very useful vocational qualification has been greatly abused to boost the 5 A-C grades in many school.
- Triple Science is not recognised in league tables. Many teachers work very hard to give pupils the opportunity of studying the three sciences, only to see this counted as two grades in government tables.
- Papers used to be completed by testers. I understand that this is no longer the case. The number of mistakes is very concerning as it is completely off putting for candidates who waste time on unanswerable questions. Pupils are now beginning to assume that if a question appears to be unanswerable, it must be a mistake, which of course may not be the case. With one board and less papers, resources could be channelled into getting things right.
- AQA are very good at supporting teachers with free INSET and a good network for enquiries. By contrast, OCR charge for INSET sessions and there are never enough places for all who wish to attend.
- Examination fees are now a huge proportion of the school budget and in addition, pupils who wish to retake exams must pay themselves which discourages the less well off or pupils without supportive parents.
- The arrangements for Science exams is now extremely complicated and time consuming and the new ISA exams take so long to complete that some schools do not do any practical work apart from the ISAs, which is certainly not in the spirit of the subject. It would be much easier to change exams for the better if there was one board rather than several competing for business.

November 2011

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## Written evidence submitted by Roger Porkess

### THE RESPONDENT

1. This is an individual response and so I will start by saying something about my background. I was a classroom mathematics teacher for about 25 years and then moved into curriculum development, running Mathematics in Education and Industry (MEI) for 20 years. I retired from being MEI's Chief Executive in 2010 but am still an active member of the mathematics subject community and involved with several mathematics organisations. However, this is a purely personal submission.

2. During my time at MEI, I was responsible for the development and maintenance of their A Level syllabus, and for support materials including textbooks. The MEI syllabus is examined by OCR; it is a major national syllabus. As a result I have a depth and breadth of experience that I believe to be relevant to this enquiry. I have been involved in the world of examining for over 30 years and continue to be involved in all its processes: marking, setting, revising and awarding. This extends to an understanding of how an awarding body operates.

3. I have also been the author, co-author or editor of approaching 100 textbooks, including five major series, and consequently have an intimate knowledge of that aspect of publishing.

### OVERVIEW

4. We live in a time when socio-economic structures are undergoing rapid change. The need for manual labour has all but disappeared and the need for professional, scientific, technological and management skills has risen sharply and is continuing to do so. These changes have profound implications for our education system; we need to take everybody to a higher level than we did in the past.

5. This presents very considerable challenges in designing and assessing an appropriate overall curriculum. It will take us into new territory, providing many students with a level of education with which, in the past, they were often deemed incapable of engaging. Frequently we do not know what approaches will be most successful. For these reasons curriculum development is essential, and with it the space to try out different approaches. It is likely that some of the most successful will originate with classroom teachers finding what works best for the students in their classes.

6. Moving to a single examination board would remove the routes through which such curriculum development naturally occurs. Instead it would fossilise the status quo, with perhaps an occasional major change. Ordinary teachers would be excluded from the process. Having multiple awarding bodies increases the scope for development, particularly if, as is currently often the case, they offer more than one specification for a particular qualification.

7. Curriculum development is also required to keep syllabuses up-to-date with the ways the various subjects are used. The impact of modern technology means that what is seen as important in mathematics, science and technology is continually changing; in mathematics, for example, the presence of computers mean that numerical methods are routinely applied to problems that were previously intractable, and so the relative importance of numerical and exact methods is changing. Many subjects, including the social sciences, are now able to embrace statistics, using suitable software, and are doing so; this is changing their academic nature. School and college syllabuses need to keep abreast of these changes if they are to turn out students with the skills they will need in employment and in higher education.

8. Curriculum development is thus not some optional extra. It is key to the future success of this (and every other) country. It would be a national tragedy if we were to close down the very structures that, properly used, will allow this country to be a world leader.

9. It would be facile to claim that the present system works perfectly but the reasons for any problems need to be properly understood. In my view, the major causes are the regulatory system and the use of qualifications as accountability measures in performance tables. Without a proper analysis, we are in danger of treating the symptoms and not the disease.

### THE NUMBER OF EXAMINATION BOARDS

10. In the past there were many more examination boards and the qualifications they offered, and the associated syllabuses, were respected around the world. This high esteem was a result not just of their integrity, but also on the fact that some of them were among the most up-to-date in the world. So, for example, in the 1970s SMP Mathematics provided advice to countries as diverse as China, Uganda and the United States.

11. At that time, many universities were formally involved in school examinations. They had some influence on the curriculum development that went into the highest quality syllabuses but much of the drive and vision for them came from curriculum development bodies, charitable foundations and groups of teachers. All the parties involved (examination boards, universities, teachers and external sources) worked together.

12. Many changes have occurred since then: a massive increase in the amount of regulation, and its intrusiveness; a reduction in the number of examination boards; the almost complete withdrawal of universities from school examinations (only Cambridge now remains); (in my view) a reduction in the quality of many, but not all, syllabuses and an associated loss of richness of students' experience.

13. It is hard to overstate the damage done by regulators, over many years. The operation of the present incumbent, Ofqual, is shrouded in secrecy. Many relevant meetings are subject to non-disclosure agreements so that those in a position to comment on the problems they are creating are not in a position to do so.

14. With the reduced number of examination boards, and the increases level of regulation, the opportunities for curriculum development are much reduced but do still exist. This has always been the basis for our best syllabuses and qualifications.

15. If the number of examination boards was to be reduced to one, I am in no doubt that it would signal the end of curriculum development. That would be a triumph of mediocrity. As a country we need to play to our strengths and curriculum development is one of them.

16. The use of national qualifications as accountability measures in performance tables creates many of the problems that are blamed on the examination boards. Reducing the number of examination boards would not solve these problems; they would resurface in other forms because the conflict of interests between schools and their students inherent in the dual use of qualifications would remain.

17. Present accountability measures are based on an assumption of comparability between different subjects, within subjects and over time. However, they fail to ensure comparability. It is my view that no external regulator could achieve comparability and so I recommend the model suggested on page 98 of *A world-class mathematics education for all our young people* (The Vorderman report).

#### THE QUALITY OF EXAMINATION PAPERS

18. Having been involved in the production of examination papers for some 25 years, I have no hesitation in saying that over this time there has been a marked and steady increase in the care and attention to detail that is devoted to all the processes involved.

19. There have always been mistakes in papers. The difference now is that they are reported in the media. Such an error is usually the result of a late change to a question.

20. The very considerable care that is devoted to examination papers cannot address the limitations of that form of assessment. In my own subject of mathematics a very high level of reliability is achieved, but at the expense of validity. Important aspects of the subject, written into syllabuses (often as learning outcomes), do not get tested and consequently are usually not taught.

21. Despite the professionalism that goes into setting most examination papers, it is nonetheless the case that some of them are not of the highest standard, with questions that are dull and inconsequential. There do not seem to be adequate mechanisms in place to prevent such papers continuing to be set, and so they can give the whole examination system a bad name.

22. Strict rules governing the awarding of grades are imposed by Ofqual. While I have every confidence in the sincerity of those examination board officials and senior examiners who carry out awards, I believe they are constrained by flawed procedures.

23. In the last few years there have been cases of lapses of security that should have resulted in papers being withdrawn. The fact that this did not happen raises serious questions about the role of the regulatory authorities at those times.

#### TEXTBOOKS

24. In recent years it has become common practice for examination boards to commission textbooks and to endorse them with their logos. In many cases these are not particularly good books but the endorsement ensures that they are bought in preference to other books that may be much better.

25. It has now become common practice for examination boards to enlist their senior examiners as authors for such books and for their positions to be used in marketing the books. The skills of setting examination questions and writing textbooks are completely different and so this is not the best way of ensuring quality books.

26. Potential textbook authors need to be encouraged and nurtured so that the best emerge as the writers of excellent books in the future. However, such talent is being squeezed out by the practice of systematically using examiners instead.

27. As a nation we place great trust in our examination boards and those who work for them. However, the activities with respect to textbooks can only be seen as an abuse of their privileged position.

28. Consequently examination boards should be disallowed from endorsing textbooks in any way, including allowing their logos to be used on them.

29. However, a clear distinction needs to be made between textbooks endorsed by the examination boards and those provided by such bodies (for example subject associations, charitable foundations and curriculum development bodies) who are also providing external syllabuses that are being examined by one of the boards. These have always been among the best available textbooks; they are written to give teachers and students

access to the philosophy and pedagogy underlying the syllabuses and their origins are quite separate from the assessment. In mathematics, SMP and MEI have both produced series of high quality books. Such books should be allowed to carry the names and logos of the independent organisations that are responsible for them.

30. When examiners are involved in textbook authorship, the publishers should be disallowed from making any reference to their role as examiners. Some examiners happen also to be good authors and there is nothing wrong in their doing both, providing their dual role is not used for marketing purposes. We need to make use of the best available authors, whether or not they happen to be examiners.

*November 2011*

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**Written evidence submitted by Dr Ian Jones, Mathematics Education Centre, Loughborough University**

**EXECUTIVE SUMMARY**

1. Current exams use short response items that enable a high marking reliability but fail to capture authentic evidence of the conceptual knowledge and higher order thinking skills we value and need. So long as this remains the case any attempt to increase the accuracy of setting papers and marking scripts will result in yet shorter and more predictable items that move us even further away from assessing deep understanding. Fortunately, tightening up awarding bodies' existing procedures is not the only way to increase accuracy. A new assessment method called Adaptive Comparative Judgements (ACJ) enables the use of authentic evidence and yet achieves an even higher reliability than traditional short response items. ACJ would therefore enable us to ensure accuracy in setting papers and marking scripts in a way that is beneficial rather than detrimental to how we teach and assess our children.

**BRIEF INTRODUCTION**

2. I am a Senior Research Fellow in Mathematics Education at Loughborough University, currently funded by a Royal Society Shuttleworth Education Research Fellowship and the Nuffield Foundation. My central research interest is in analysing the limitations of current GCSE mathematics exams and testing alternative models of assessment. Prior to this I worked on numerous mathematics education projects and was a school teacher for 10 years.

**FACTUAL INFORMATION**

3. Exams offer a time-honoured and efficient method for gathering evidence about students' learning and achievement. However, current exams—and mathematics GCSE papers in particular—have been criticised for being too narrow and predictable. They fail to gather evidence of the very conceptual knowledge and higher order thinking skills that our country values and needs. They fail because they comprise short response items that require only the rote recall and application of facts and procedures.

4. Exams comprise short response items because traditionally that is the only way to ensure a high marking reliability (ie that each student gets the grade he or she deserves). This is because assessment practices are dominated by traditional testing theories—namely Classical Testing Theory, Item Response Theory and Generalisability Theory—which assume and require that knowledge and skills be fragmented into atomistic items that can be objectively scored. So long as traditional testing theories continue to dominate assessment then the only way to increase accuracy will be to design papers that are even more fragmented and even more removed from assessing the very conceptual knowledge and higher order thinking skills we value and need.

**RECOMMENDATION FOR ACTION**

5. A new method has emerged that offers an alternative to traditional testing theories. The method—called Adaptive Comparative Judgement (see paragraph 6 for details)—is based on a long-standing and well-established psychological principle—Thurstone's Law of Comparative Judgement—and is now viable for large-scale assessment due to recent technological innovations. Unlike traditional testing theories, ACJ is based on expert judgements of authentic evidence of students' conceptual knowledge and higher order thinking skills. Moreover, it surpasses traditional methods in terms of reliability and validity. In other words we can now assess the learning we value and need more accurately than we currently assess the learning we do not value or need.

**APPENDIX**

6. Assessment using Adaptive Comparative Judgement (ACJ) involves presenting examiners with pairs of candidates' work and asking them to decide which of the two demonstrates a better understanding of the subject. Thurstone's Law of Comparative Judgement states that people are very reliable when deciding which of a pair of objects has more of a given quality such as "understanding of the subject", and ACJ exploits this principle to construct stable and robust rank orders of candidates' work. The normal procedures for assigning grades to candidates can then be undertaken, and as with traditional methods this can be criterion referenced or norm referenced as preferred. Previous studies have demonstrated that ACJ is (i) highly reliable and robust;

(ii) works with evidence of conceptual knowledge and higher order thinking skills; (iii) can be as time and cost efficient as current practices.

November 2011

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### Written evidence submitted by The Mathematical Association

1. The Mathematical Association is the oldest of the subject associations and the largest such association in Britain supporting mathematics teachers in their endeavour to promote good mathematics teaching and learning. We are pleased to be offered the opportunity to present our views on such an important matter as the administration of examinations. The views and evidence presented below have been gathered and constructed by the association's Teaching Committee, chaired by Dr Chris Pritchard. The association is a broad church and not every suggestion made below is universally held across its members.

2. The Mathematical Association believes that in considering the best approach to the administration of examinations the over-riding factor should be the raising of standards so that the system attracts the confidence of higher education, of business and industry, and indeed of the general public, whilst the quality of teaching and learning is driven upwards. Further, we feel that the three specified questions cannot be answered without first clarifying the prerequisites for any model for the administration of examinations.

3. As will be seen from the arguments below, we see potential advantages in working towards a single awarding body. However, there may prove to be considerable barriers to such a move in the short to medium term. So whilst expressing a general preference for a single body, we also suggest an alternative, competitive model which we believe would be a significant improvement on the status quo.

#### PRINCIPLES FOR CONSTRUCTING A MODEL FOR THE ADMINISTRATION OF EXAMINATIONS

4. When considering the formalisation of examinations, thought should be given to philosophical questions relating to each subject area, such as, for mathematics, "Are we teaching the subject because it is an intellectually worthwhile and culturally valuable subject to learn, with a unique perspective on the generation of knowledge? This will set the context within which the design work is undertaken.

5. The examination system should operate for the benefit of the learners (and their carers) and end-users of the public examination system; this will not only influence the model but should ideally reduce the range of choices available to centres.

6. Policy formation and analysis should emerge naturally out of a permanent core of subject expertise within the Department, with teachers and universities making a significant contribution and full interaction with the wider community, including drawing on the expertise developed within the awarding bodies.

7. Candidates' results should reflect their performance. That performance must be judged against standards and be comparable to similar performances both across awarding bodies, if more than one exists, and over time.

8. There should be an understanding that examining is a craft rather than a science and that examination results are never wholly reliable. An effective system requires an effective bureaucracy; but this is never sufficient. There is a need for competent professionals to exercise judgement, both at the setting/checking and at the marking stages.

9. To avoid the mechanisation of examination administration and decrease the chances of mistakes being overlooked, the processes of setting and marking should focus on content rather than procedures.

10. The model must be responsive to, if not anticipate, changes in society and in education and must have built in, the opportunity to innovate. Such opportunity should not be confused with the opportunity to make capital by constantly changing examination specifications so that new textbooks are needed.

11. The whole system must have transparency. There must be a climate in which questions are answered openly. Key meetings should not be held in camera (as was the case with the QCA Annual Meeting, for example, during the A-Level grades crisis in 2002).

#### THE CURRENT COMPETITIVE MODEL

12. The Mathematical Association is concerned that the current competitive model may be creating downward pressure on genuine standards.

13. The market for the administration of examinations is a lucrative one with each awarding body seeking to maximise its share of the cake, particularly in large-entry subject areas. In order to attract as high a proportion of each examination cohort as possible to take its papers, the "products" need to be as appealing as possible. There is evidence, partly demonstrable, partly anecdotal, that the awarding bodies tout for business on the basis of lower cost, easier papers and more sympathetic marking régimes. The first of these incentives has a clear financial attraction to schools and local authorities and need not influence standards, whilst the last two offer the potential for better examination statistics, though at the expense of standards.

14. It is possible that this downward pressure on standards exists without market forces actually affecting choice. Although we have multiple specifications, awarding bodies cleave to the middle of the market to maximise market share; that is, there is little variety amongst the choices available. Furthermore, it is a major upheaval for a school or college to change awarding body and that makes not only for a viscous market but one where there is not much competition on price. (Ofqual's market reports show very little movement in market share over time but they do not indicate the degree of churn, the net effects.) If it is true that in seeking a larger share of the market, question difficulty and marking standards are depressed, whilst the differential in price across the awarding bodies is too small to convince schools to switch, then there is a hit on both educational standards and the public purse.

15. With regard to the maintenance of standards and confidence in standards, perception is at least as important as substance. We recognise that the examinations of yesteryear, designed for an élite intellectual group within each cohort, cannot be compared with their "equivalents" today, written for a broader achievement spectrum. Nevertheless, there is evidence of decline, see for example the work of Robert Coe in Durham and Tim Oates at Cambridge Assessment (presentations by both of them at the Ofqual conference on 13/10/11 are available on the Ofqual website).

16. One further specific point perhaps worthy of note is that the current arrangements appear to suffer from reduced interactions between awarding bodies and both university academics and experienced school teachers. Links with universities have largely been severed and teacher-involvement has changed markedly, so that the best of those who contribute no longer feel that their professional competence is being valued. The resulting process is increasingly driven by bureaucratic concerns relating to managing somewhat mechanistic marking processes and towards removing the need for candidates to "join the dots" for themselves. Furthermore, the unnecessary multiplication of specifications dilutes the pool of examiner expertise.

17. In summary, it would appear that the current situation, in opening the way for continuously decreasing standards, challenges the view that public sector activity benefits from competition and private sector input.

#### CASE FOR A SINGLE AWARDING BODY

18. The Mathematical Association can see potential advantages in working towards a single awarding body. (In making the case, we acknowledge that such a position is not held universally in the association.)

19. Examination boards were established by the universities in the second half of the 19th century and the early years of the 20th. By the 1960s there was a huge number of boards for CSE, O Level and A Level and the trend since has been to consolidate, right down to the current three bodies. The move to a single body could be seen as the inevitable and logical conclusion of such a process. And indeed, it would be hard to believe that should we be establishing a system for the first time now, we would consider anything but a single awarding body model.

20. Across the world, it is far from unusual for countries to have a single awarding body, including countries larger than England. Of smaller nations, our nearest neighbours, Scotland, Wales and Northern Ireland operate single body models successfully. Interestingly, the Scottish Qualifications Authority commands a high level of public support and respect despite the occasional highly-publicised problem arising.

21. Calls for a single body are not new. The inspectors' reservations about GCSE standards in 1992 led to calls for a single awarding body, and these calls were repeated following Mike Tomlinson's review of the 2002 crisis. And there is precedent for a lack of choice: the KS3 tests were common to all students and did not seem to be controversial in terms of there being no choice of examination.

22. The advantages of a single body include:

- simplification: a single awarding body would likely lead to fewer specifications, removing at least those that exist for purely competitive reasons;
- reduced costs: the production and administering of one set of papers is inevitably less than those of three sets;
- supporting innovation: the reasons for a minimal change model would be removed;
- concentrating expertise, which also brings further efficiencies; and
- consistency: year-on-year consistency will never be fully under control but the need to make comparisons across multiple bodies would be eliminated.

23. However, we are mindful that should only one organisation produce papers, it is essential that the available level of expertise is such as to ensure that they are of the highest quality, encourage good teaching and support innovation. This may imply a long lead time to such a change.

#### AN ALTERNATIVE COMPETITIVE MODEL

24. We attempt below to describe a competitive model different in nature to the current one. It is not expected that such a model would be adopted in its entirety, but hope that elements of it will resonate with those designing the new model.

25. According to this model, examinations would continue to be packaged as commodities, though those elements relating to standards would be reserved to public control (but not necessarily execution). The writing of specifications would be in the hands of user communities under public co-ordination and supervision. This would include provision for experimental specifications.

26. Those elements of examining a specification which are standards-specific (paper setting, mark scheme writing, standardisation of marking, grading) would be separated out. A public body (perhaps DfE or Ofqual) would award contracts for these for fixed periods to contractors for specific subjects or groups of subjects. The price structure of the contracts should be such as to give no incentive to the contractor to increase or decrease the uptake of their subject(s). The present awarding bodies would be able to bid for the contracts but would need to separate the operation from their other activities (eg no shared staff). Others would also be able to bid, perhaps NFER or institutes of higher education, or suitable consortia. The elements being included in the contract should be such that there would be no need for a large infrastructure so as to open up the market. The contracts would be awarded on a quality basis rather than cheapest tender. The awarding bodies would continue to badge the papers and market specifications (more than one could offer the same specification), distribute question papers, mark them, and distribute results and certificates, as well as providing customer service.

27. Measures would be put in place to assure standards of marking across awarding bodies, and this would be supervised rigorously by Ofqual, possibly including an element of cross-marking between awarding bodies (on an anonymous basis). The awarding bodies would licence the question papers etc from the public ring-holder and therefore would have no direct commercial dealings with the contractors. Under such an arrangement awarding bodies would compete on price and quality of service. Changing awarding body would be less traumatic than at present and this would lead to a more fluid market in which centres or consortia of them could seek to drive down cost. New players might also enter the market.

28. The interface between the contractors and awarding bodies would be well-defined and include suitable penalties in contracts to ensure it is in the financial interests of all parties that the system works well. Such an approach would suggest it was important to ensure the market is sufficiently diverse that players do not emerge who are so big that their failure would capsize the system.

#### FRANCHISING INDIVIDUAL SUBJECTS

29. The option of franchising individual subjects appears to encourage inter-subject competition and have the potential to exert a downward pressure on standards. If one body has the franchise for Subject A and another has the franchise for Subject B, then to attract the floating students who are wavering between A and B, each awarding body will want its examinations to be perceived as the easier. To protect their income, both bodies would be inclined to drop their standards in response, thus triggering a downward spiral.

#### ENSURING ACCURACY IN SETTING PAPERS, MARKING SCRIPTS, AND AWARDING GRADES

30. We offer views below on four issues: criterion referencing of questions, the practice of marking, the drawing of grade boundaries and the handling of causes for concern.

31. Accuracy in matching assessment items to curricular expectations is difficult to sustain and regulate when the awarding body is driven by the economic imperative of passing as many candidates as it can. A single body responsible for the development, trialling and implementing of examinations for all students at a given assessment stage is therefore preferred. The body should be directly responsible to the Department, thereby reducing bureaucracy, and all who work within it should be qualified in assessment.

32. The criteria and often the specification are often laudable, but the questions and mark schemes frequently fail to reflect them fully. There should be less predictability in what candidates face and greater freedom for markers to exercise professional judgement when awarding marks. The arrangements should actively dissuade teachers from advising candidates that when in doubt, present two or more conflicting solutions in the hope that one of them might be marked correct.

33. Grade boundaries would be determined on an annual basis by the experts working in the examination team. They would draw on moderated samples of students' work and, importantly, a process of matching with curriculum expectations, custom and practice.

34. For decades, concerned teachers have written to awarding bodies each year complaining (often with considerable justification) of "unfair" or inaccurate examination questions; and each year the exam board would consider carefully how to reply, and seek to learn whatever lessons needed to be learned. More recently such "errors" have been communicated directly to the national press. It may well be that the number of serious errors is not very different from what it has always been. Or it may be that the massive increase in the extent of assessment (as a result of modularisation and repeat sittings) has increased the stresses on the checking system, leading to more frequent errors. We encourage the Committee to talk to awarding bodies to get an accurate picture of actual trends.

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THE COMMERCIAL ACTIVITIES OF AWARDING BODIES, INCLUDING EXAMINATION FEES AND TEXTBOOKS, AND THEIR IMPACT ON SCHOOLS AND PUPILS

35. There is some concern about the detrimental effect on secondary education of the increasing involvement of awarding bodies in the preparation, endorsement and publication of textbooks.

36. We are also uneasy that textbooks are prepared with contents limited to what is needed for a specific examination and then endorsed by the awarding body. Lacking depth and covering a limited range of subject material, such textbooks give students little incentive or opportunity to engage with broader and richer material; they do not foster an appreciation of the subject's subtleties. This practice results in reducing the intellectual endeavour of learning to uninspiring repetition aimed squarely at passing the relevant examination; it narrows students' horizons, sets for them false criteria of personal achievement, and de-professionalises teachers.

37. To this has recently been added another concern—namely the increasing involvement of awarding bodies in Continuing Professional Development (CPD) of teachers. This trend combines with the links between examination boards and production of textbook to reinforce the tendency to “teach to the test”. CPD sessions run by awarding bodies are likely to focus on explaining to teachers how to train students to maximise marks in examinations set by one particular board, while a textbook endorsed by the same awarding bodies leaves the teacher no option but to coach students for the relevant examination.

38. In summary, we would welcome amendments to the regulatory framework that forbid an awarding body from producing materials for which it charges, and requires that a textbook author's link to an awarding body be publicised. We would also welcome clear constraints on the kinds of CPD courses and events examination boards are free to advertise. In particular we would welcome an introduction of a rule (similar to the one existing in the Civil Service) that senior employees and examiners of awarding bodies should be forbidden to publish educational material or deliver certain forms of CPD (based on their inside knowledge) both during their employment in an awarding body and for a specified period after termination of their contract.

November 2011

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**Written evidence submitted by the Examination Officers' Association (EOA)**

The inquiry will consider the benefits and drawbacks of having several awarding bodies for qualifications taken by 15–19 year olds and the extent to which the current system delivers the best and fairest educational outcomes for young people.

**BACKGROUND ON THE EXAMINATION OFFICERS' ASSOCIATION (EOA) AND ITS COMMUNITY**

The EOA represents over 2,000 exam centres in the UK and has been undertaking independent research on exam delivery and awarding body customer service since 2000–01. Exam office staff (support staff), provide an essential link between the internal activities of teaching and learning in centres and the external assessment process associated with public examinations. Exam Office Staff, therefore, provides the interface between centre activity and awarding body services.

The following quote below demonstrates the passion, commitment and informed professional perspective the EOA community have on delivering a more sustainable and cost effective exam system.

*“Our exams system is held in high esteem and therefore its reputation is second to none in the world. If we are to maintain this reputation and the value of British qualifications, then we must not take any short cuts in the assessment process. As stated before, qualified and professional exams officers are an essential part of the current assessment process.”*

*Mohammad Mahboob (Exams Officer, Birmingham)*

**REQUEST TO ATTEND THE EDUCATION SELECT COMMITTEE MEETING FOCUSING ON THIS INQUIRY**

The EOA as the professional body for the exam officer community, represents the people responsible for the front line delivery of exams and would welcome the opportunity to give oral evidence to the committee: to explain the waste and inefficiency inherent in the current system and how this detracts from good educational outcomes; and the risks that the system currently faces at the front line that must be addressed if we are not to see further problems of the scale of last summer's errors or worse. The exams system is currently under extreme pressure and improvements are critical.

**SUMMARY OF KEY POINTS THAT NEEDED TO BE ADDRESSED TO REDUCE THE RISK IN EXAM DELIVERY IN CENTRES:**

- The EOA acknowledges the need for diversity and competition if they encourage real improvements in customer services to centres, especially at delivery level (eg. correct exam papers & stationery).
- Multiple systems and practices by awarding bodies in the area of exam delivery result in unnecessary expense and workload for centres and are going to continue to disenfranchise the exam office workforce that are already under extreme pressure so adding a greater risk to the safe delivery of exams in their centres.

- The lack of good communication and more appropriate CPD training on various educational and exam developments needs to be addressed if awarding bodies and government want to help reduce waste and encourage good practice in our exam centres. A poorly trained and over pressurised workforce will not respond appropriately, even if better communications and systems were implemented.

*Statement 1: Arguments in favour of and against having a range of awarding bodies, and the merits of having one national body or examination boards franchised to offer qualifications in particular subjects or fields*

- 1.1 Our community think that the notion of one national body for all qualifications is unworkable.
- 1.2 The majority of the exam office community feel that a change to a single national body would not reflect the national, regional and local diversity which different awarding bodies provide over a broad range of qualifications.
  - 1.2.1 Diversity in the examination environment is welcomed by all the education community, including the Exams Office Staff but if one is to persist with the existing multiple awarding body model the way in which these numerous awarding bodies operate, must change. Some of the issues outlined below are endemic within the education/exam culture and need to be addressed otherwise the consequences for the exam office community and the exam service they support will be at best, damaging—at worst, result in total meltdown.
  - 1.2.2 Currently, different awarding bodies are increasingly interpreting the rules, regulations and procedures creating an imbalance in service provision. Awarding bodies seem to have been given such a leading role in exam delivery that the issue over balancing national educational needs against commercial market forces must be addressed, otherwise those in centres trying to respond to all the directives by awarding bodies will never be able to cope, given their present staffing and funding constraints.
  - 1.2.3 This causes Exams Office Staff problems in ensuring that they get things right for each awarding body—different forms, different dates, different procedures all for the same qualifications and it's getting worse and adding risk to an already overburdened workforce and system.
  - 1.2.4 Over 80% of schools have only one exam officer managing their entire exam system (often the second biggest budget after salaries) and some have to deal with over 40 awarding bodies with multiple systems and practices (on average salaries of £15,000). Due to the unnecessary pressure and work burden being imposed by these multiple individually driven awarding body systems, choice for candidates and exam centres are not being fully realised.
  - 1.2.5 The present induction programme provided by the past QCDA organisation and supported by the EOA since 2004, only focused on new exam office staff coming into post and on the provision of general qualifications, excluding the vast day-to-day interaction of many exams office staff with vocational qualifications. Awarding bodies' perspective on "training" exams office staff to deal with all their different systems is to provide courses and activities which are compliant driven and tailored around their commercial products and services. Neither provision, therefore, can ever support the exam office effectively while government allows so many delivery systems to continue unchecked.
  - 1.2.6 It would be easier to enforce standards across the board if there was just one awarding body, for example, in marking, in setting papers, and administration in general. Everything would be more transparent with no claims of commercial interests to keep things secret. Even government departments have struggled to access information on the general welfare of education/exam systems because some of that data is thought to be commercially sensitive. This poses the question—"should the future of our young people at this level be determined by external commercial interests?" The EOA feels one can still have a vibrant commercial market while at the same time introduce and maintain appropriately agreed practices and systems that will reduce work burden and increase efficiency.
  - 1.2.7 Since the demise of Curriculum 2000 there has been a growing commercial agenda set by the last government and responded to by awarding bodies to meet market needs but many feel at centre level that the exam system has become a vehicle led by awarding bodies and not a system that complements educational excellence. As the EOA was born out of the damaging experience of Curriculum 2000 it was stated at that time that the exam system would never experience that environment again and learn from its mistakes. Sadly, both the Educational Testing Service (ETS) and diploma experiences bear witness to the fact that despite the EOA's quest for reform on many of these deep seated issues, lessons have not been learnt and what we have seen is a papering over of the cracks in the system.
  - 1.2.8 Exam Office Staff simply deliver the system they are directed to manage and administer. They are faced with yet another problem which is controlled, understandably by awarding bodies—the issue of appropriate fees. If one had one awarding body, a standard set of fees could be set for schools and colleges, with candidates and parents knowing what to expect, especially for re-sits costs. Under the existing system schools and colleges have little choice in where to go so the actual cost rarely

- comes into the decision process when deciding which awarding body to go with for a particular subject or qualification.
- 1.2.9 Such decisions in schools and colleges are mostly made by teachers who have little idea of the fees involved and do not consult Exams Office Staff on such issues as the amount of administration involved in dealing with a particular awarding body. Teachers are mostly concerned with what is likely to be the best outcome for students by using a particular awarding body—“my students will get a better deal if I use X, their marking seems to be much fairer than Y”. Changing from one awarding body to another for a subject is not unusual. But is this playing of the system fair to all? Does our exam system operate in a fair and transparent manner, and is it available to all, equally?
  - 1.2.10 Last year over £20 million pounds was wasted on late fees by schools and colleges. The late fees issue, however, does not lie solely at the door of yet another awarding body directive. A number of exam centres have been identified as having very poor or dysfunctional exams offices by the outgoing QCDA CSO teams. In many of these cases the centre managements’ complete lack of understanding of the vital role Exams Office Staff play in the safe delivery of examinations has led to over 600 centres being without any established exams office staff to manage and administer the exams processes, or without adequate support at peak risk times.
  - 1.2.11 The issue over late fees has been around for a number of years and the problem over “rogue centres” continuing to get away with late fees was partly addressed by the outgoing QCDA CSO team who highlighted poor exam administration in already fragile centres. It was pointed out at an exams’ Task Force meeting a few years ago that once QCDA had stopped chasing centres on late fees, they began to climb again. What was not picked out, was the fact that every time the government introduced new exam development to which awarding bodies had to respond, late fees went up. This is because exams office staff were being asked to introduce and manage new systems without adequate training and, as the EOA surveys have pointed out consistently over the past 10 years, poor awarding body communications are a key factor.
  - 1.2.12 This is not purely an argument for advocating more training for exams officers. The EOA believe that if you provide appropriate CPD for the exams office community, and not awarding body driven compliance training as we have at present, one will have a more flexible workforce who are more receptive to both government and awarding body communications, related to change.
  - 1.2.13 Late fees will continue to eat away at education budgets as long as local authorities, through government, pay up while awarding bodies benefit from the impact of the multiple systems they’ve created in the first place, and in which exams office staff have to operate. Poorly managed and ineffective exam offices inject additional risks into an already creaking system.
  - 1.2.14 However, part of the awarding body response is associated with the historic cultural practice of always letting candidates sit an unplanned exam (defined as “pirate entries”) and then for exam office staff to sort out the paperwork and the repercussions later so as not to potentially compromise any candidate. Understandability, no awarding body would want to be attacked in the press for appearing to prevent students in centres taking their exams by rejecting late entries. Some awarding bodies would argue that the late fees they charge never cover the additional resources needed to deal with these centres.
  - 1.2.15 Up to the age of 16 years, students must remain at school and part of their educational experience is the taking of some form of assessment (s) which bench marks their level of attainment before going on to FE or into employment. Awarding bodies therefore are part of what many consider as “a give” in society and their exam services will always have to be provided whatever the costs. Clearly, that assumption by society as a whole does not match the reality with growing regulatory practices and administrative burdens being operated by existing exam service providers. A more realistic approach needs to be adopted before the whole system breaks down, especially in the present economic climate.
- 1.3 Suggested solutions to help serve the needs of Exams Office Staff and the exam system as a whole.
    - 1.3.1 A more co-operative and collaborative approach on exam delivery, would cut costs, reduce work burden and focus more resources into teaching and learning. Awarding body competition should be encouraged in order to stimulate better customer service in all areas of delivery but not be used as it is to impose individualistic practices that are not cost effective to exam centres.
    - 1.3.2 By adopting a set of national standards for the management and administration of exams, set and overseen by Ofqual—all awarding bodies should use the same dates, procedures, forms and stationery (this common approach, which was welcomed and supported under the old National Assessment Agency modernisation programme 2004–06, is now being reversed with centres having to find additional storage space for different awarding body stationery). Similarly, common fees for qualifications and services would be advantageous. This would encourage a better customer driven environment between awarding bodies and centres. It would allow awarding bodies to offer their own qualifications but within a more controlled and strictly regulated environment.
    - 1.3.3 Too often awarding bodies make decisions about the management and administration of the exam system without fully understanding what actually happens in schools and colleges. Too few staff with practical experience of implementing complex exam procedures are now employed by them.

- 1.3.4 The JCQ play a very important role in trying to bridge the differences between various awarding bodies but their regulatory documents on running exams are published with little or no consultation with the very exam office community that has to operate and police their rules in centres—rules which seem to focus more on the needs of awarding bodies rather than on the customer (some of the statements on centre security, for example, seem so draconian to members that many centres feel they are totally unrealistic and undeliverable).
- 1.3.5 The announcement and implementation of the withdrawal of hard copy results went ahead despite the informed comment by the exam office community that some centres and awarding bodies were not set up to deal with this change and needed more time. Member centres pointed out that some colleges still do not accept non-awarding body results slips but the process went ahead regardless, resulting in some students being compromised. Surely these sweeping decisions which affect us all should be made in closer collaboration with those it will impact on, ultimately the students they serve.

*Statement 2: How to ensure accuracy in setting papers, marking scripts, & awarding grades*

- 2.1 Accuracy is key when it comes to anything in the world of exams, whether it be for administration, publications, documentation, inputting data, processing documents, and anything else that involves human action in one form or another. All too often mistakes are made by individuals who are under pressure or are poorly trained, or who lack sufficient skills to carry out the job effectively.
- 2.2 Some actions, however, require the individual to interpret information, for example, the marking of scripts. The subjective nature of the questions and answers can often lead to interpretations of the marking schemes which do not relate to what the question setter originally intended. Similarly a too rigid following of a marking scheme in which the marker makes no allowance for a candidate's lateral or wider thinking can be equally problematic and disadvantage the candidate.
- 2.3 These situations have led to a number of Appeals on the grounds that the awarding body has not followed its own procedures, i.e. not followed the marking scheme correctly. The present appeals system only deals with a handful of cases each year out of thousands of enquiries. Most, never get beyond the individual awarding body committees and are regulated and orchestrated behind closed doors.
- 2.4 In all of these scenarios it is clear that the training of individuals is paramount, especially for staff who are recruited on temporary contracts at busy exam periods—both markers, administrators and consultants.
- 2.5 In the case of question paper setting, there must be a number of stages in place where both the accuracy of the question and the accuracy of the actual printed exam question paper is checked. There can be little excuse for the provision of numerous erratum notices after the exam papers have been issued to schools and colleges. As in the case of exam paper errors this year the existing systems in place only deal with issues retrospectively and do not take into consideration the full impact of such events on staff and students on the day. Exam papers should be prepared a year in advance. With modern technologies, the question of security of the exam question paper for such a long period of time should not be an issue.
- 2.6 The inputting of incorrect data at awarding bodies has been an issue for a number of years. Whether the problem lies with the quantity of data involved and the pressure that data processors are under to deal with it in a very short space of time; or the software being used does not have fail safe error mechanisms built into them; or staff have little interest in what they are doing and lack an understanding of the consequences of their errors (often a problem with temporary staff), is not clear. There is probably an element of all of these issues in the errors that we see.
- 2.7 Too often this year members have seen students being awarded incorrect marks and grades because of basic administrative errors by markers and awarding body staff. They have only been picked up by requests for a Review of Marking, or a request for a script, or the mark or grade is quite clearly wrong and the awarding body has been challenged on its accuracy. For example, an A grade student who received only one mark for a paper and had an A in all her other papers, and had answered all the questions on the paper.
  - 2.7.1 When challenged the awarding body admitted that they were in error. This took several days to resolve and the students and her parents were unnecessarily distressed throughout the period. The apology from the awarding body was a very bland letter which appeared to be a stock letter with personal and exam details filled in stating that there had been an administrative error. It is easy to pick up extreme cases as described but what about the others which are not so obvious and go uncorrected.

*Statement 3: The commercial activities of awarding bodies, including examination fees and textbooks, and their impact on schools and pupils*

- 3.1 The awarding bodies have to generate some profit in order to survive and develop—they are businesses. The government, therefore, has a dilemma. While education of the nation is a government responsibility its exam delivery seems to be in the hands of commercial interests which now drive the quality and services being made available. It could therefore be suggested that the government

should adopt a more pragmatic approach to the products and services provided by awarding bodies, by making them more accountable to the exam centres they serve (their customers) and not just to government, through Ofqual.

- 3.2 It is inevitable that awarding bodies, even within the government policy framework, will take every opportunity to maximise financial income and decrease expenditure. As belts have had to be tightened in recent years, we have seen awarding bodies pass costs to schools and colleges which in the past have been included in entry fees and fees for other services.
- 3.3 The EOA is committed to supporting “*private candidates*” and to give them the same access to the exam system as students in defined exam centres. The impact of entry fees on 16–19 year olds taking re-sits can be considerable for students and parents. Most schools and colleges will charge an additional administration fee to cover the costs of extra invigilation and processing of the re-sit entry. For less well off students, the costs, even without the administration fee are too much and they become disadvantaged as they cannot afford to take re-sits.
- 3.4 Increasingly, schools and colleges have been told that they must download and print their own documents, results, etc putting considerable costs onto schools and colleges without any reduction in awarding body fees. Awarding bodies will of course argue, and to some extent they are right, that by doing this, they keep the costs of entries and other services down.

#### REPORT INFORMATION

The following report has been compiled from a variety of sources including—EOA surveys (2000–11), emails and phone calls in response to articles and requests made on the EOA website news section which are available to the whole exam office community and from its regular e-newsletters to members.

Compiled by Andrew Harland (Chief Executive), Alan Waymont, Exams Manager of Peter Symonds College, Winchester (ex-chair of the EOA) and members of the EOA Board of Trustees.

November 2011

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### Written evidence submitted by Dr Tony Gardner, University of Birmingham

#### EXECUTIVE SUMMARY

A: A single awarding body may seem attractive, and you may conclude that we should *work towards* such an arrangement. However, the premature imposition of such a structure would involve clear dangers. We first need an understanding of, a clear commitment to, and a cultivation of, the essential concomitant *centralised specialist competence* (in each discipline such as mathematics, and in the intricacies of how to design and run an assessment system that *supports good teaching*). The current problems appear to derive not so much from having *three* main awarding bodies, as from the fact that one of the three is driven by principles that appear incompatible with “public service”, and the others then see no alternative but to “compete”.

B: Assessment is a craft. The current shortcomings at 16–19 are much more profound than a matter of “accuracy”. Assessment is inevitably approximate, and depends on professional judgement. One should work to minimise errors. But attempts to *guarantee* the level of “accuracy” (in an attempt to avoid the possibility of “errors”) lead to trivialised assessment items and rigid mark schemes that are in no-one’s interests.

C: The expanding commercial activities of awarding bodies are a national disgrace; the phenomenon is most acute with one of the three main awarding bodies, but the others often see no alternative but to follow suit. If the police were to publish and profit from books and courses telling motorists “how to avoid conviction for speeding or driving offences”, this might well lead to a reduction in the number of recorded motoring offences; but no-one would defend the practice on those grounds—for it would be clear to all that any consequent reduction was a *dishonest fiction*. Similarly those bodies that provide public assessment (and their employees) should be banned from giving advice on how to improve grades, from endorsing exam-related materials, and from profiting from such provision. Moreover, we must somehow escape from the current situation where an awarding body can be owned by a (large and powerful) business, whose ultimate primary is financial rather than educational, and which can use its power to face down government agencies (such as QCDA and Ofqual).

#### INTRODUCTION TO THE WITNESS

I am a research mathematician who has spent 40 years straddling the gulf between universities and schools. Since 1989 I have been Reader in Mathematics and Mathematics Education at the University of Birmingham. I was President of the Mathematical Association in 1997–08, and Chair of the Education Committee of the European Mathematical Society 2000–04. For 30 years I served on various committees of the JMB/NEAB/AQA. I started (and for 10 years ran) the national pyramid of mathematical challenges and Olympiads which now involves around 650,000 pupils each year. This submission is a personal (and less restrained) “gloss” on views which have been expressed by other sections of the mathematical community.

A. *The arguments in favour of (and against) having a range of awarding bodies for academic and applied qualifications etc*

A1: We need a *permanent core* of subject expertise—within the DfE, and in some related agencies (including Ofqual). Cultivating the necessary expertise is a long-term process: we cannot neglect the responsibility to cultivate such experience and competence, and imagine one can then “outsource” such matters, or “train up” civil servants at short notice. (This should have become clear both from QCDA’s attempts to revise the 2007 National Curriculum having previously sacked their “subject teams”, and from the current attempt to review the curriculum without a national curriculum agency.)

A2: At one stage, KS2 and KS3 SATs were an embarrassment. But at some point in the late 1990s or early 00s, QCA established a dedicated group, who both developed in-house expertise, and established constructive links with the wider mathematical community. The result was that the quality of the test papers, and that the professional perception of the resulting product (especially at KS3) improved markedly. Instead of being protected and nurtured, this core group was then hived off to Pearson (publishing and training provider who control Edexcel), their ruminations became inaccessible, the experts were put out to grass, and the short-lived “tradition” was lost. Similarly, awarding bodies such as AQA (previously NEAB, JMB) *used to* involve academics from the constituent universities and a remarkable bunch of experienced teachers from schools; but the links with universities have been systematically dismantled over the last 30 years, and the nature of teacher-involvement has changed. As a result, many of those who contribute to the setting and marking processes no longer feel that their professional competence is being valued; instead, the process is increasingly driven by marketing, by bureaucratic concerns relating to managing the (increasingly mechanistic) marking process, and by a determination never to require candidates to “join the dots” for themselves.

A3: Before we can effectively debate the first of your three questions, we need to take stock and to:

- (a) ensure that the current awarding bodies are obliged to re-engage with teachers *and with universities* so that a national pool of dispassionate expertise can be slowly re-established; and
- (b) require that the DfE (and/or related agencies) develops a settled core of *internal* expertise related to key subjects, and builds mechanisms for effectively interacting with expertise in the wider community, so as to inform any policy changes and to lubricate the process of their implementation.

A4: While we engage with these two long-term projects (A3(a) and (b)), we must pursue a path that minimises the danger of centralised disasters (such as “Curriculum 2000”, or the last KS3 SAT fiasco). The situation is far from ideal; but the tradition of *pluralism* would tend to suggest that, *until we are in a position to trust a competent central “authority”*, it makes sense to continue with a degree of appropriately monitored *variety*, giving each operator sufficient freedom for the community to benefit from a degree of choice and innovation (whilst at the same time avoiding centralised folly).

A5: You may need separate confidential sessions with officials and ex-officials from the three main awarding bodies and relevant civil servants to clarify the way the current situation has been distorted by the pure commercialism of one of awarding bodies (forcing the others to follow suit).

B. *How to ensure accuracy in setting papers, marking scripts, and awarding grades*

B1: This question is not as simple as it may appear: “accuracy” alone is a poor guide to *quality*. The fact that some of our best schools have abandoned A levels in recent years tends to confirm the clear impression that the quality of these assessment instruments has indeed been degraded. You need to talk (a) to suitable head teachers, and (b) to experienced examiners who have recently “retired” (or resigned) in order to get a better feeling for the nature of the perceived change, and to the pressures which have led to the perceived decline.

B2: You may discover that the *frequency of assessment* and the way setting and marking have been “administratively mechanised” in recent years have combined in ways that allow question setting errors to be overlooked (because the processes often focus on checking *procedures*, rather than *content*—an observation which is linked to our response to A above).

B3: Ex-examiners may alert you to a more serious degradation in the overall quality of exam papers, and the awarding of grades. Downward pressures on the quality of papers seems to result (in part) from the impact on awarding bodies of excessive central pressures (from Ofqual etc.) for their exams and their marking to be “fair”—pressures which your own eventual report could exacerbate if carelessly worded! For excessive focus on “accuracy” and “fairness” leads to boringly predictable questions, in which candidates are never required to “join the dots”, and in which mark schemes treat markers as automatons (who are then merely expected to apply rules, even where these run counter to their professional judgement: for example, many candidates are trained, when in doubt, to present two or more *conflicting* solutions, and I know that markers used to be instructed to give the marks if *one of them* was roughly correct—even though the candidate has no idea *which* solution was correct). The awarding of grades has obvious moved dramatically: Dr. Robert Coe is reported as having declared (at the Ofqual standard summit on 13 October 2011) that “data showed grade inflation was continuing. In A level mathematics, the level of ability worth a grade D or E twenty years ago would now secure an A or a B”.

B4: Examining is a craft rather than a science: *examination results are never wholly reliable*. An effective system requires an effective bureaucracy. But an effective bureaucracy is not sufficient: one still needs competent professionals to *exercise judgement*—both at the setting/checking and at the marking stages.

B5: The use and abuse of league tables (by government and by the media—neither of whom seem interested in grappling with nuances) has encouraged a simplistic view of exam results which ignores the fact that the numbers that emerge from any assessment process are *approximate artefacts*. Provided the assessment process is allowed to do its job unmolested, it can provide approximate *individual* results, and much more accurate *statistical* information; but this function is undermined, and the public misconceptions are exacerbated, if the assessment process is compromised by the belief that raising target scores is a way of “driving up standards”. As the old Soviet “five year plans” showed, raised targets can generally be met (and surpassed) without any *real* improvement. In education, the pressure to “meet targets” regularly deflects attention from the kind of instruction that contributes to students’ long-term mathematical development.

B6: For decades, concerned teachers have written quietly to exam boards each year complaining (often with considerable justification) of “unfair” or inaccurate examination questions. And each year the examiners and the relevant committee would produce a report in which such complaints were addressed. More recently one has the impression that such “errors” have been communicated directly to the national press! It is hard to be sure, but it may well be that the *number* of serious errors is not very different from what it has always been, and that *the real decline is in the overall quality and demand* of exam papers (cf B3). I encourage the Committee to talk to awarding bodies (and critical ex-examiners who may feel more able to “spill the beans”) to get an accurate picture of such trends.

### C. *The commercial activities of awarding bodies, including examination fees and textbooks, and their impact on schools and pupils*

C1: All responsible members of the mathematical community are concerned at the increasing involvement of examination boards in the preparation, endorsement and publication of textbooks, which is having a seriously detrimental effect on secondary education.

C2: We are alarmed that textbooks are prepared with contents limited to what is needed for a *specific examination* and are then endorsed by the awarding body. Such textbooks regularly lack depth and cover a limited range of subject content (being designed narrowly towards passing a particular exam); they also give students little incentive or opportunity to engage with broader and richer material, and fail to foster an appreciation of the subject’s subtleties.

C3: This pattern has had an invidious impact on *publishers*, who appear no longer interested in publishing serious mathematics textbooks which seek to present elementary mathematics in a way that is independent of any particular syllabus.

C4: The precise history needs to be clarified. But the summary is clear: one awarding body was much quicker to see the commercial (and anti-educational) “opportunities” in the early 1990s; their moves were at first resisted by the other two awarding bodies, who still recognise that these moves are against the public interest, but appear powerless to resist; the trend was exacerbated when the “trend-setting” awarding body was allowed to be bought out by a large commercial publishing group—who now appear to be more powerful than the regulating agencies. Until the awarding bodies (whether one or three) operate once more as a *public service*, one can expect English “public” examinations to continue their decline.

C5: The practice of reducing mathematics to “exam-fodder” reduces candidates’ experience of learning to a “boring drill”, whose only perceived purpose is to pass a particular examination. When combined with a modular system and regular examinations, the traditional eye-opening experience of A level studies is completely lost. The resulting pressure to focus on a particular set of exams, rather than on the discipline ostensibly being studied, narrows students’ horizons and sets them false criteria of personal achievement. And it de-professionalises teaching.

C6: “Teaching to the test” is destructive in every subject area, but it is especially harmful in mathematics education. In the field of mathematics, the current *National Curriculum Review* and the promised review of A Levels will not achieve the ambitious goals set by the Government if this urgent matter is not addressed.

C7: To this has recently been added another concern—namely the increasing involvement of examination boards in *Continuing Professional Development* (CPD) of teachers. Just as we need a core of professional competence in key subject areas (cf A: above), so a system needs to cultivate a system which guarantees high quality local CPD provision. This used to be provided through Local Authorities and through local universities; both have been squeezed without any alternative provision. So we are left with no effective mechanism for assessing local needs and for providing the necessary support. The vacuum has been filled by unmonitored private providers and by exam boards.

C8: Exam boards should clearly be free to present and to explain their syllabuses to interested teachers. The problem arises when such *marketing* sessions are advertised as “CPD” (in a climate where real *dispassionate* CPD opportunities are increasingly rare). The additional link between exam boards and the production of textbooks only serves to reinforce the plague of “teaching to the test”: CPD sessions run by exam boards can too easily slip into explaining to teachers how to train students to maximise marks in exams set by their

particular board, while a textbook endorsed by the same board often restricts the teaching to coaching students for the relevant examination.

C9: Many would welcome amendments to the regulatory framework to forbid the involvement of examination boards in the production of textbooks, the endorsement of textbooks, and the running of courses and events advertised or recognised in any way as “CPD”. In particular we would welcome an introduction of a rule (similar to the one existing in Civil Service) whereby senior employees and examiners from awarding bodies should be forbidden from publishing educational material, or from benefitting materially from “exam-linked CPD” during their employment by an awarding body and for a specified period after the termination of their contract.

November 2011

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#### **Written evidence submitted by the National Association of Headteachers (NAHT)**

(i) The current arrangement of having several awarding bodies is often referred to as a “market” but the arrangements have characteristics that render the use of this term problematic. In a conventional market competitors can base their marketing on absolute outcomes but, clearly, an awarding body cannot make a comparable claim by, for example, pledging more C grades.

(ii) Players in the market must therefore compete by developing a reputation for quality of service and by product differentiation. The former includes such elements as speed of response to queries, quality and availability of guidance and support materials, perceived accuracy of marking and appropriately targeted and effective in-service training.

(iii) The argument in retaining the present structure is that this competition is a driver for ensuring and maintaining the quality of service and provision. The radical policy of having one national body could, arguably, only incorporate one of the elements listed above: product differentiation. By way of explanation, this refers to offering a range of specifications for a given subject.

(iv) A counter-argument might run along the lines that quality assurance measures would be built into new structures. However, this raises the key question of whether regulation can compensate for, match or emulate the responsible operation of market forces.

(v) Extending the market metaphor, it could be argued that the dominance of a few providers, certainly in meeting the needs of schools, runs the risk of a cartel emerging. NAHT members do not appear to believe that this is the case and there appears to be confidence that the current regulatory arrangements provide the necessary framework for precluding this from occurring.

(vi) However, there are concerns expressed by some members that there are some barriers to competition within the current system. The ability to choose what is perceived to be the most appropriate specification for a particular group of learners can be constrained by the costs of switching from one specification to another if this would require purchasing text books specifically written for a given specification.

(vii) The issue of text books is one that is a matter of concern for some NAHT members. There is a perception that examiners and chief examiners are able to benefit from writing texts. NAHT believes that there may be something of the “urban myth” surrounding this perception. The Association is aware of, for example, the strict guidelines operated by one awarding body that prohibits those in such positions from publishing texts that include references to their status as examiners. NAHT believes that there is a strong case for greater transparency in this matter.

(viii) However, the possibly erroneous perception regarding a “droit de seigneur” for examiners to publish text books does not lessen the concern felt about the tie up between some specifications and texts.

(ix) Further to this matter, the point should be made that schools do not tend to change specifications on a frequent basis. There is an interesting tension between continuing with a specification that teachers, using their professional judgment, believe to be the best-suited to meet the needs of pupils in their school and the dissatisfaction, inconvenience and irritation experienced when the service aspects of provision do not meet expectations. It is suggested that the tipping point comes when a perception emerges that the quality issues are compromising the integrity and quality of assessment.

(x) To the best of NAHT’s knowledge there is not a body of evidence that seeks to explain how schools arrive at the judgment that a particular specification is right for a particular cohort of pupils. The Association is prepared to stand corrected if wrong in this view. If such research exists it could usefully shed light on the focus of this inquiry. If it doesn’t, NAHT would venture that research of this nature would be beneficial in developing a fuller understanding of how consumer decisions are made.

(xi) To summarise, NAHT members do have some concerns about the current structure. However, the Association remains unconvinced that radical solutions such as having one national body or a franchise system would provide a solution. The production of examination papers and associated materials is a complex and organic process. Awarding organisations have well-established and sophisticated research and development

operations informing provision. It is difficult to envisage how this could be replicated under the alternative arrangements suggested. This is particularly the case with a franchise system.

(xii) A further potential problem with a franchise system is envisaging how potential participants would be attracted. The examinations “business” is one that requires an established corpus of expertise. Perhaps the reality would be that the existing players would specialise in given areas. However, franchises have—in theory—a limited shelf life and it could be the case that this uncertainty would act as a disincentive to entry.

*November 2011*

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**Written evidence submitted by Fiona Nicholson, independent home education consultant, Sheffield**

1. I wish to place on record the fact that home educated children are invariably overlooked in any redesign of the qualifications system. A striking example of this would be the introduction of controlled assessments. Controlled assessments have effectively excluded home educated children from taking GCSEs.

2. The logistics of taking exams as private candidates presents a serious obstacle for home educators.

3. I am making this submission as an independent home education consultant and long-term home educating parent. I am the former Chair of Education Otherwise Government Policy Group and also acted as Trustee and Director of the charitable company. I have given evidence on home education practice and policy to Government Committees in the past.

4. It is thought that around 40,000 children in England are home educated.

5. Home education is to be distinguished from Education Otherwise than at School or EOTAS where the local authority or school retains responsibility for pupils who are out of school for a number of reasons including where the young person is anxious, “school-phobic”, sick, pregnant, a young parent, a young carer, excluded or at risk of exclusion.

6. Local authorities may have between six and 600+ home educated children “on their books.”

7. It is rare to find local authorities able to offer any assistance or advice to home educated young people taking exams as private candidates and it should be borne in mind that local authorities receive no funding for home education.

8. In some cases families would say that they have no choice but to take children out of school and home educate them. This might be where children have been badly bullied at school or where the child’s special needs are not being met.

9. Some families make a considered decision to home educate when their children are very young. There may be philosophical, cultural or religious reasons for their choice.

10. Many home educated young people choose to enter Further Education at the age of 16 but some young people—such as my son—prefer to continue in home education. Discussion of Level 3 exams for 16+ affects home educated young people just as much as Level 1 and 2 exams for pre-16s.

*November 2011*

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**Written evidence submitted by the Sector Skills Council for Science, Engineering and Manufacturing Technologies (SEMTE)**

**1. EXECUTIVE SUMMARY**

(i) We propose that competition amongst awarding organisations, for applied qualifications, provides a stable and cost effective service to learners and their centres and which also contributes significantly to the maintenance of standards.

(ii) A change to a single awarding organisation isn’t likely to attract the employer involvement and engagement levels currently supporting awarding organisations which is so crucial for assessment strategies which are fit for purpose and ultimately provide progression opportunities for young people into industry.

**2. THE SUBMITTER OF EVIDENCE**

(i) Semta is the Sector Skills Council for Science, Engineering and Manufacturing Technologies. We aim to address the sector’s skills needs, providing expert support to improve performance and growth.

(ii) The Semta Group comprises EAL (EMTA Awards Ltd) which is the UK’s leading awarding body for engineering National Vocational Qualifications (NVQs) and their Scottish equivalents (SVQs). Established with the sole purpose of helping the industry invest in its future through vocational qualifications, and as a sister company to Semta, EAL has unrivalled expertise in meeting the qualification needs of the engineering and technology sector. The Semta Group also comprises The National Skills Academy for Manufacturing which is a centre of excellence to tackle the skills priorities of the UK manufacturing sector.

### 3. EVIDENCE

(i) Semta knows, through the experience of our Awarding Body, EAL and National Skills Academy for Manufacturing, that it is vital for the future of the businesses we represent and for the employment and economic growth the government wishes to achieve, that the vocational education and training sector, both in its awarding functions and delivery are able to provide a robust and agile response to our sectors' needs. This will ultimately mean more employment opportunities for young people in this vitally important growth sector for government.

(ii) Semta endorses the government's overall reform programme to provide genuine choice for employers and learners and a high quality education sector which meets their needs.

(iii) In terms of the examinations aspect, it is also crucial that there is a competitive environment to allow direct employer engagement in the process which creates genuine pathways for learners within schools into the engineering, manufacturing and technologies sectors.

(iv) Semta forecasts that in our sectors there will be requirement in England of some 138,000 jobs over the next five years representing a crucial opportunity for young people, who are well prepared to enter the industry. This means there needs to be an environment which supports awarding organisations who understand their sectors, their employers, and their future skills requirements and who are adept at translating these needs into interesting and challenging syllabuses of applied learning.

(v) EAL currently provides vocationally-related qualifications at levels 1 and 2 on the Qualifications and Credit Framework (QCF) to over 2000 students aged between 14 and 16, across England, Wales and Scotland. These qualifications enable both the application of disciplinary knowledge—in mathematics and science—to engineering concepts and, conversely, enable the use of those applications to strengthen and reinforce the learning of the disciplines.

(vi) The learning outcomes of EAL's qualifications are designed to be assessed through a variety of media—not only "examinations"—and it is the availability of this variety, coupled with their employment of full-time technical experts, who provide advice and guidance on both learning and assessment, which gives the learner a rich experience founded on current industry practice.

(vii) We would be concerned that the introduction of external examinations into school qualifications that are also offered in further education could create a two tier system. For example, there could be two tiers of BTEC Applied Science qualifications but both based on the same specification. The schools would have some external assessment built-in but in further education the same qualification would continue with internal assessment. This could lead to confusion amongst learners and employers and standards would be difficult to maintain. In the case of Engineering, the BTEC's for example, would be undermined as they are also used in Apprenticeship Frameworks.

(viii) Whilst some of the content of units of learning on the QCF is fixed by the SSC such as Performing Engineering Operations (PEO) and used by all awarding organisations, the flexibility that allows awarding organisations to also offer their own brand of qualifications can only exist in a competitive environment. These important qualifications are also in many cases the technical certificates within engineering apprenticeship pathways—the PEO providing the reassurance that the learners and future apprentices would be safe working in a business. These qualifications therefore provide important progression opportunities for learners to gain apprenticeships and we would be opposed to any significant changes to their assessment that would devalue their status with employers and possibly create confusion with providers.

(ix) In the vocational education and training sector, we are not confident that a single awarding organisation for schools would galvanise employers, across every occupational area, to engage in the qualification development process to the level that currently exists or that is necessary to ensure applied qualifications and assessment strategies are fit for purpose and enable progression.

### 4. RECOMMENDATION

(i) We recommend that having a competitive environment offering choice amongst awarding organisations offering applied qualifications in the vocational education and training sector holds the greater value and is more appropriate for meeting the needs of learners, centres and employers both now and in the future.

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## Written evidence submitted by David Leitch

### SUMMARY

1. The marking of examination scripts has many risks attached to it. In some subjects there is a shortage of experienced, competent examiners. Less competent examiners make mistakes which, if undiscovered, may result in the issuing of results to candidates which do not reflect their abilities. Once results have been issued, awarding bodies may not have sufficient will to uncover such mistakes and, if uncovered, to rectify them, leaving the responsibility of querying results to centres and candidates.

### INTRODUCTION

2. I work for Cambridge Assessment, OCR's parent organisation, as a senior supervisor in the Post Examinations department. The majority of my time is spent dealing with OCR examination scripts—receiving, storing, despatching and otherwise handling them. I have been in this role for five years.

### INFORMATION

3. Once examination results have been issued to centres, the Access to Scripts (ATS) process begins. This process allows centres and candidates access, for a fee, to their scripts. OCR introduced a new method of dealing with ATS requests for the recent June 2011 series. The new procedure involves scanned pdf images of the requested scripts being produced by staff within my department. These pdfs are uploaded to an internet-based portal to which the centres have access. The previous procedure involved photocopies of scripts being sent to centres for Priority requests and, at a later date, original scripts being sent by post to centres for Non-Priority requests. As part of the new OCR process for dealing with ATS requests, the pdfs are checked to ensure that all of the pages of the scripts have been scanned and that they are as legible as the original scripts themselves.

4. Soon after this checking process began, in the third week of August, it was discovered by one vigilant member of staff that some of the scripts had marks which either had been added up incorrectly or had not been transferred correctly to the front of the scripts by the examiners, thereby resulting in incorrect total marks being awarded to the candidates. "Clerical error" is the term we use to describe such an error. The Qualifications Managers (QMs) who are responsible for the syllabuses were informed and OCR senior managers also became aware of the issue. Over 100 scripts requested by centres as part of the ATS process contained clerical errors. Over 80 examiners were responsible for these errors.

5. My team and I considered it necessary to carry out supplementary checks on the other scripts marked by these examiners in order to discover the extent of the problem. When senior OCR managers became aware of these supplementary checks, they tried on several occasions to stop them taking place. On the 22 of September an OCR assistant director informed my line manager by email that all "unauthorised" checks for clerical errors should stop and that the QMs should not be contacted, a senior manager to be contacted instead. Covertly, we continued to investigate. About 200 further scripts with clerical errors have been found during these supplementary checks.

6. OCR's chief executive was sent an email on 23 September in which the discovery of clerical errors was brought to his attention. On the 14 October the OCR assistant director and OCR's director of standards explained, in a meeting with me and two others, the position to be adopted by OCR. The suggested resolution concentrated on the steps to be taken to reduce the scale of the issue for future series. With regard to the current June 2011, they stated that supplementary checks on scripts should not be carried out because these had not been authorised either by OCR or by the centres or by the candidates. Also, they were not willing to inform the centres of the mistakes which had been uncovered in the supplementary checks. They mentioned that, firstly, not all the scripts in storage had been checked for clerical errors and, secondly, the supplementary checks had not been undertaken in previous series. Apparently, these are reasons for not setting right the errors which we have discovered in this June 2011 series. Reluctantly, I said I would not carry out any more supplementary checks. At the end of the meeting, I said I was unhappy with OCR's proposed resolution and wanted to discuss the matter with Ofqual. On 17 October I informed Ofqual of my concerns. The matter has been passed to its investigations team. Subsequently, OCR informed my line manager that particular supplementary checks should take place. This has been done and the information passed back to OCR. There are, however, still many examiners who made clerical errors for whom full supplementary checks have not taken place.

7. We have found about 300 scripts with clerical errors for the June 2011 series. Less than 5% of the scripts we have in storage have been checked for clerical errors by my team.

8. Ofqual's General Conditions of Recognition, with which all awarding bodies must comply, states that: "Where the application of an appeals process in the case of a Learner leads an awarding organisation to discover a failure in its assessment process, it must take all reasonable steps to—(a) identify any other Learner who has been affected by the failure, (b) correct or, where it cannot be corrected, mitigate as far as possible the effect of the failure, and (c) ensure that the failure does not recur in the future." This refers to the "appeals process". Does any Cambridge Assessment or OCR representative coming before the committee believe this instruction extends, in spirit at least, to the Access to Scripts process? If so, is the Cambridge Assessment or

OCR representative happy that, not only have several senior OCR staff not abided by the instruction, they have also forced, or tried to force, others not to abide by it?

9. With reference to paragraph 8, how can an awarding body ensure that the failure of an examiner to add up their marks correctly does not recur if the full extent of the examiner's errors is not uncovered? Decisions regarding the suitability of examiners to mark need to be as informed as possible.

#### RECOMMENDATIONS

10. Closer scrutiny of examiners' marking of examination scripts should take place, by the awarding bodies themselves and by an outside agency. The outside agency should be allowed full, unfettered access to the script storage area to undertake its own checks.

11. After examination results have been issued, any errors discovered in the results issued to centres and candidates should be notified to the regulator, Ofqual, and to the centres and candidates. Any candidate whose work merits a higher grade should be awarded a new, higher grade.

12. Awarding bodies should offer full support to all members of staff who discover errors in the marking of examination scripts, whether pre- or post-results issue.

*November 2011*

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### **Written evidence submitted by E-Skills UK**

#### 1.0 SUMMARY

1.1 This document is the e-skills UK written input to the Education Committee's Inquiry into the administration of examinations for 15 to 19 year olds in England.

1.2 As the Sector Skills Council for Business and Information Technology our mission is to make sure Britain has the IT skills it needs for innovation, global competitiveness and sustainable economic growth. We do this by taking our lead from employers and working with government, IT professionals and IT training providers to tackle skills needs and support economic recovery. Our strategic objectives set out a coherent skills strategy to a) Inspire Future Talent, b) Support IT & Telecoms Professionals and c) Promote the benefits of IT.

1.3 Our submission to the inquiry concentrates on whether the current system is providing the best opportunities for young people to progress in education for future employment. We also explain how employers in the IT sector are coming together to help address the issues in the education system.

1.4 The IT & Telecoms industries contribute 8% (in excess of £61 billion) of England's total Gross Value Added (GVA). One in seventeen people (1.37 million) are employed in England work in the sector representing 6% of total employment. The sector is predicted to grow strongly to 2019 and around 96,000 new entrants to IT & Telecoms professional job roles are needed in England each year to meet projected growth and replacement requirements.

1.5 Employers are concerned the pipeline of future talent is compromised by issues related to IT education and uptake in schools. Numbers taking IT related GCSEs and A-levels continue to fall and gender imbalance is pervasive. The current curriculum is turning young people away from IT in university and employment. Employers and higher education institutions want a radically different curriculum and rigorous assessment to inspire and provide a sound academic grounding for further education and learning in the technology area.

1.6 We are strongly in favour of industry-academia partnerships in schools to ensure the best educational and employment outcomes for young people. Using this model, work has begun on the development of a brand new IT academic curriculum, through the "Behind the Screen" project, to establish rigorously assessed GCSEs and A-levels that will be highly regarded by universities and employers and attractive to students and teachers.

#### 2.0 INTRODUCTION

2.1 As the SSC for Business and Information Technology, e-skills UK works on behalf of employers to ensure the UK has the technology skills it needs to succeed in a global digital economy. Our work covers software, internet and web, IT services, Telecommunications and business change. e-skills UK takes the lead on the IT-related skills needs of business leaders and managers and of individual workers in all sectors (IT users).

2.2 We are an employer-led, not-for-profit company, and were rated as "outstanding" in the re-licensing review of all SSCs by the National Audit Office (NAO) and UKCES. We bring together employers, educators and government to address the technology-related skills issues no one party can solve on its own and provide advice, services and programmes that have a measurable impact on IT related skills development in the UK. The membership of the e-skills UK Employer Boards can be found in Annex A.

2.3 Our strategic objectives drive a coherent skills strategy that enables the nation to create the skills needed for sustainable growth and to derive maximum benefit from the power of technology to transform

competitiveness and productivity. We work with partner organisations to deliver on three strategic objectives to ensure the UK is world class in delivering maximum value from technology both in business and in society more widely:

- *Inspire future talent* by motivating students to pursue IT-related careers and better prepare all young people for work in a technology-enabled world
- *Support IT professionals* by helping them develop world-class skills
- *Promote the benefits of IT* to organisations and individuals across society

2.4 Our response sets out the evidence base, briefly outlining the importance of the sector and the nature of current issues with IT related education for young people. We conclude with a summary of the Behind the Screen pilot programme for new GCSEs and A-levels where the IT sector is starting to tackle some of the key issues with IT related education in schools.

2.5 All the data used in this response is from Technology Insights 2011: England,<sup>14</sup> (e-skills UK, January 2011) unless otherwise specified.

### 3.0 IT SECTOR SKILLS NEEDS AND EDUCATION

#### *IT & Telecoms sector skills needs*

3.1 Technology is the key ingredient for global competitiveness in the private sector and for efficiency in the public sector. The IT & Telecoms industry in England currently delivers an annual GVA contribution in excess of £61 billion, 8% of the total economy and is recognised as a key sector for growth.

3.2 One in seventeen people employed in England work in the IT & Telecoms workforce—that is 1.37 million or 6% of total employment. Of these people, 1,005,000 are employed as IT & Telecoms professionals.

3.3 Growth in the sector is predicted to continue strongly to 2019 with employment in the IT industry expected to grow at 2.23% per annum, nearly five times faster than the predicted average employment growth for England. Over 480,000 new entrants to IT & Telecoms professional job roles are needed in England over the next five years to meet projected growth and replacement requirements.

#### *IT education in schools*

3.4 There are major issues with IT-related education in schools and with the uptake of IT-related subjects in higher education. Around 16,000 people a year are needed to enter the sector from education, predominantly at graduate level as IT related Higher Education remains an important source of talent for the sector's labour force requirements. Although the number of people applying to Computing courses in Higher Education increased by 10% over the past year, for the period 2002–2009 numbers fell by 44%.

3.5 The number of students taking A-level Computing has fallen for the 8th consecutive year, to just 4,000. This accounts for just 0.5% of all A-levels sat in the UK. The GCSE results for 2011 also show a further decrease in entries from 2010 to 80,440, 28% down from the number of entries in 2010 for all ICT courses (full, short and double awards). As a proportion of all GCSEs sat in the UK, ICT GCSEs have declined from 2% in 2010 to 1% in 2011.<sup>15</sup>

3.6 e-skills UK research shows students' experience of IT at Key Stage 4 is a major factor in the decrease in IT-related education at school and beyond and these issues are seriously compromising the pipeline of future talent.

3.7 Students are avid users of technology, from mobile phones to gaming, but there is currently little in the current school curriculum to develop the knowledge and understanding needed to progress to IT related higher education or employment. Employers and higher education institutions want to see a radically different curriculum in schools with rigorous assessment to inspire and provide a sound academic grounding for further and higher education and learning in the technology area.

### 4.0 SOLUTIONS FOR IT EDUCATION IN SCHOOLS

4.1 In order to meet the needs of the sector and the economy as a whole, a new approach in IT related education is critical. We need to:

- Promote the sector as a high growth, high skill sector with excellent earning potential and career prospects for young people and adults.
- Ensure that IT-related qualifications and curriculum are valued by industry and delivered by quality providers.
- Ensure teachers have access to relevant CPD in order to deliver an industry endorsed curriculum.

4.2 e-skills UK and employers are setting out to establish a brand new academic curriculum, including new, rigorously assessed GCSEs and A-levels through the "Behind the Screen" pilot. The programme topics are

<sup>14</sup> [http://www.e-skills.com/Documents/Research/Tech-Insights-2011/eskills\\_2011\\_TechInsights\\_ENGLAND.pdf](http://www.e-skills.com/Documents/Research/Tech-Insights-2011/eskills_2011_TechInsights_ENGLAND.pdf)

<sup>15</sup> e-skills UK analysis of JCQ Provisional A level and GCSE results, August 2011

designed to be highly motivating to students, interesting and topical but also underpinned by a formal academic process to deliver skills and knowledge. <http://www.e-skills.com/behindthescreen>

4.3 Our objectives are that these new qualifications are highly regarded by leading universities and employers (on a par with science, maths and English), and highly attractive to students. They will not focus on IT literacy; that needs to be covered at an earlier age, and as a basic skill rather than an academic subject. They will focus on IT as the enabler of business and society in the modern world.

4.4 Behind the Screen, is led by a partnership of employers including IBM, the BBC, Blitz Games, Capgemini, Cisco, Deloitte, HP, JohnLewis, Logica, the Metropolitan Police Service, Microsoft, National Grid, Procter & Gamble, Sainsburys, SAS, Steria and TATA. 20 schools, 100 students and a cohort of teachers have volunteered to participate in the pilot. This new model of academic/industry partnership is key to ensuring young people develop the scientific understanding, problem solving capability and creative flair to keep the UK at the forefront of a technology-enabled world.

4.5 Employers are demanding students acquire an appropriate body of knowledge and go through a rigorous assessment process to ensure that only those passing a tough exam can achieve the qualification.

4.6 Academic substance in the new qualifications will include computational principles, systemic thinking, software development and logic. Coursework will develop deep analytical, problem solving and critical thinking skills. Industry-backed challenges will encourage creativity, entrepreneurship and team work. Tough exams will motivate and differentiate. Teachers in schools will be supported by industry, both in their own development and through access to a rich online resource pool—including online lessons from national and international experts.

4.7 Through this action, we want to place IT as the spearhead for a new model of academia/industry partnership in schools, and we want to put the UK ahead of its international rivals in its education of young people for success in the e-enabled future economy.

## Annex A

### EMPLOYER BOARD LIST

#### IT & TELECOMS INDUSTRY BOARD

David Thomlinson	Country Managing Director, UK & Ireland	Accenture
Sally Davis	Chief Executive	BT Wholesale
Philip Oliver	CEO	Blitz Games
John Pluthero	Executive Chairman, UK	Cable&Wireless Worldwide
Phil Smith (Chair)	VP and Chief Executive, UK & Ireland	Cisco
Craig Wilson	Managing Director and VP, UK and Ireland	HP Enterprise Services
Stephen Leonard	Chief Executive UK, Ireland	IBM
Andy Green	CEO	Logica
Gordon Frazer	MD, UK and VP, MS International	Microsoft
David Callaghan	Senior Vice President	Oracle
Gayna Hart	MD	Quicksilva
A. S. Lakshminarayanan	Vice President and Head—Europe	Tata Consultancy Services
Nick Read	CEO of Asia-Pacific & Middle East Regions	Vodafone

#### CIO BOARD

Paul Coby (Chair)	IT Director	John Lewis
Philip Langsdale	CIO	BAA
Tiffany Hall	CIO	BBC
Lesley Hume	CIO	Cabinet Office
Simon Post	Chief Technology Officer	Carphone Warehouse
Joe Harley	Government CIO; & CIO, DWP	DWP
Ailsa Beaton	Director of Information	Metropolitan Police Service
David Lister	CIO	National Grid
Catherine Doran	Director Corporate Development	Network Rail
Angela Morrison	CIO	RBS Insurance
Rob Fraser	IT Director	Sainsbury's
Richard Thwaite	MD CIO, Global Asset Management IT	UBS
Ben Wishart	Change and Information Director	Whitbread

## Written evidence submitted by University of Cambridge International Examinations

University of Cambridge International Examinations is the world's largest provider of international education programmes and qualifications for five to 19 year olds, operating in over 160 countries. In the UK, Cambridge offers syllabuses and examination of them in International GCSEs, International A-levels and the Cambridge Pre-U. It is part of a department of the University and a not-for-profit organisation.

We have sought to give the Committee evidence of how matters work overseas when addressing the arguments "*in favour of and against having a range of awarding bodies for academic and applied qualifications*". We have also drawn upon the experiences of our sister not-for-profit organisation, University of Cambridge ESOL Examinations, which delivers the world's most valued range of English qualifications to over three million people in 135 countries each year. More than 12,000 universities, employers and governments rely on Cambridge ESOL certificates as proof of English language ability.

### SUMMARY

Many countries deliberately include international qualifications within the qualifications offered to students in their national education systems to provide diversity and contestability. The primary reasons for doing so are:

- to enrich the curriculum, using innovative syllabuses not otherwise available in the national curriculum;
- to ensure that the national curriculum is exposed to ideas from abroad;
- to check the quality of their own examinations and drive improvement; and
- to link the national education system and standards to an international benchmark of excellence.

Other states, engaged in system reform, set out to include such syllabuses and qualifications to enhance the quality of learning and teaching through the provision of state "beacon" schools designed to inspire the rest of the system. They use them as "incubators" of innovation and reform (see paras 22–27).

### 1. THE PROVISION OF DIVERSITY AND CONTESTABILITY

1. *Singapore's* population is one-tenth of that of England in a geographical area comparable with the Isle of Wight. The country's rapid development has largely been achieved through top-down planning. There is a single core system of public examinations (A levels and O levels) in most academic subjects. Cambridge works in partnership with the Ministry of Education in running and continually improving this system.

2. However, even in such a centralised system, the government believes in promoting diversity in the educational qualifications offered in its state schools. This was clearly set out a few years ago in a speech by the then Minister for Finance and Education—and the approach has not changed:

[There is a] growing diversity in our education system. The Singapore-Cambridge GCE "O" and "A" level exams and curricula will remain the mainstay of the school system. They are seen internationally as carrying the rigour and consistency of standards that has defined Singapore's reputation in education, and we will ensure that we sustain and build on that reputation. But we are also encouraging the emergence of alternative curricula in Singapore education, both amongst our state-funded schools and in the private field.

The alternatives include new, special subjects in niche areas that are being developed by our schools, together with our universities and polytechnics, within the framework of the Singapore-Cambridge qualifications. But they also include whole alternatives, like the IB or the new diploma being adopted by the NUS High School for Maths and Science.

These alternatives are being encouraged not because the mainstream national system is losing credibility, as is the context in some other countries. They are being encouraged because we believe that diversity will add to Singapore's strengths.

First, a more diverse system will cater to Singapore students who have different intellectual styles and preferences, especially in their upper secondary and tertiary years. It allows us to nurture Singaporeans who are themselves diverse in their ideas and ways of thinking, in all fields of life.

Second, we need this diversity in education because Singapore education is no longer about Singaporeans alone, or about Singaporeans who spend all their school years in Singapore. More Singaporeans are working abroad, and having their children educated abroad for part of their growing years. Singapore is also a fast-growing hub for people of all nationalities, some of whom on transit and others here for long stays.

These are fundamental trends, which will reshape many things we do in Singapore. We need a diversity of schools and educational curricula to keep our attractiveness as a destination and home for families of all backgrounds—as a city that makes its mark by being the world in Asia<sup>16</sup>."

3. All pupils must study at least one of the three recognised "mother tongues". Curriculum and examinations in these areas have been opened to best international practice; with the support of the government, Nanyang

<sup>16</sup> Speech by Mr Tharman Shanmugaratnam, Minister for Finance and Minister for Education, at the International Baccalaureate Community Dinner, 1 December 2007.

Technological University has established a Confucius Institute which directly influenced the syllabus in Singapore's Chinese schools.

4. Singapore also makes use of the International Baccalaureate programmes and qualifications in a small number of selected publicly-funded schools where these are judged best to meet the needs of the students.

5. In recent years, Singapore has increased the qualifications available to students who follow vocational routes, or favour applied learning, as well as on meeting the needs of pupils who are highly talented in the arts or sport. These developments are pursued in partnership with the Singapore tertiary sector, employers and the centres of excellence overseas.

6. In *Hong Kong*, Cambridge provides specific international syllabuses for Hong Kong Examinations and Assessment Authority centres with students for the HK Diploma of Secondary Education take a number of Cambridge AS language examinations (eg Hindi, Japanese, Spanish, Urdu). Cambridge also provides annual benchmarking of standards for HKEAA qualifications.

7. *France* has several alternative syllabus and qualification routes:

The Option Internationale du Baccalauréat (OIB) is an examination administered jointly by the Ministry of Education and “foreign partners”; the partner for the British option being University of Cambridge International Examinations. The programme is open to bilingual students in designated schools with those in the British programme substituting two OIB papers for their French counterparts. The examination is of A-level standard and the results form part of the overall result of the Bacc. The OIB is seen as an essential part of international provision within French schools, designed to be not only bilingual but also “bi-cultural”. Two educational cultures come into contact—two ways of teaching and assessing, of approaching the subjects in question, and two different approaches to education.

8. University of Cambridge ESOL provides English language certification to state secondary schools across France as part of a nationwide project to improve school-leavers' second-language ability. It is assessed within the Common European Framework of Reference for Languages (CEFR). The CEFR provides a practical tool for setting standards to be attained at successive stages of learning and provides a basis for the mutual recognition of language qualifications.

9. Cambridge developed a specific test to be taken by students in the first year of the lycée. The certificates are offered to schools running “European Section” classes (where particular subjects are taught in a foreign language) and more than 100,000 students have taken the certificates over a four-year period.

10. Several other local education authorities (académies) across France have participated in a scheme whereby pupils in French collèges or lycées take a Cambridge (or Goethe Institut, Instituto Cervantes or Perugia) examination partly or wholly funded by the Conseil régional or Conseil général. Pass rates in Cambridge examinations were higher than both the world average and the average in the rest of France, indicating a positive washback effect on language learning and teaching—the aim of the exercise.

11. Since 2009 nearly 3000 students in schools with European sections sat an exam largely paid for by the Conseil Régional de Bretagne and the Académie de Rennes, enriching the CVs of many young Bretons with an internationally-recognised qualification. Lower secondary school pupils in the Nice area, including some in Zones of Educational Priority, have taken the Cambridge English: Key. Many high school students in the Académie de Reims and in lycées in the Académie de Limoges take various different levels of Cambridge English.

12. Germany has a not dissimilar approach:

The AbiBac is similar to the OIB, though it is not aimed at students with a bilingual background. The product of a Franco-German agreement, students who pass are awarded the French baccalauréat diploma as well as its German equivalent, the Abitur. Schools teaching the AbiBac have French-German bilingual sections based on the twinning of a French and a German school. The Abibac can be used for admission to both French and German universities.

13. Over the past decade a number of German states have begun to work with Cambridge. Approximately 7,500 students in the Realschulen of Baden-Württemberg, Berlin and Bavaria have been able to take advantage of Cambridge English tests, mostly delivered at age 15. The Baden-Württemberg Ministry of Education in particular sees the good results as an external confirmation of the quality of its education system.

14. In Spain a joint project with the Ministry of Education, the British Council and Cambridge to encourage bilingual education is under way. There are now some 80,000 students in 120 schools pursuing at least part of their studies through English. In the last four years students have taken Cambridge International GCSEs (IGCSE) in up to 10 subjects and, at lower levels, have followed the Cambridge Primary curriculum. The partners have been involved in teacher training with marked improvement being shown in results from the first year to the second year thanks to the further injection of professional development.

15. At local and regional governments level The Comunidad de Madrid launched a bilingual programme aimed at raising the levels of English language ability in state schools. Starting with 26 schools, this project has now grown to cover more than 200 schools. Due to its success, there are plans for it to expand in 2012. More recently, education authorities in the autonomous region of Murcia are offering Cambridge exams in 39

schools to more than 6,000 students in schools across the region, alongside exams run the Alliance Française and Goethe Institut.

16. Throughout Spain there are networks of UK Academy style schools. Cambridge is delivering a wide range of English exams to the Federación Española de Religiosos de Enseñanza (FERE-CECA), a network of 340 schools with around 210,000 pupils in Madrid and Castilla-La Mancha, the Fundació Escola Cristiana de Catalunya, with 434 schools and 264,000 pupils and Kristau Eskola, a network of 151 schools in the Basque Country with around 83,000 pupils in order to improve efficiency in language education within the school network. As part of an annual project to evaluate the English levels of the Kristau Eskola students against the Basque Trilingual Programme, Cambridge provides benchmarking services, using a bespoke test to evaluate the language abilities of both primary and secondary students.

17. In *Switzerland* it was agreed in 1998 that external examinations could be integrated within the Swiss curriculum as part of the leaving certificates of the commercial or professional schools (Berufsmatura). Cambridge ESOL was one of the examination boards whose certificates were allowed to be integrated.

In 2003, further reform meant that students on the extended basic training profile in vocational schools for commercial business training are required to reach CEFR B1 with Cambridge English: Preliminary accredited as an approved qualification for this purpose.

18. In support of the exams in the Swiss State Education Sector, Cambridge provides supplementary grade information to schools in certain areas to enable the results to be used as part of the official school assessment system—in combination with external assessment.

19. In *Colombia* the Ministerio de Educación Nacional launched a National Bilingual Project designed to equip the population with English skills for work and higher study. Cambridge was invited to help with a benchmarking project and to assist in producing a new series of state exams linked to the CEFR. Following on from the project, the government requested support to develop new national English language tests to be incorporated into the national school exit exam (Examen de Estado) taken by more than 500,000 school-leavers in 2007. Cambridge also provided training and support to the government's testing body so that Colombia could produce its own English language tests according to Cambridge quality standards, linked to international levels.

20. In addition, a new test for final year Colombian university students was introduced which included an English language component produced by Cambridge. It was taken by more than 100,000 students in 2007.

21. In the *USA* Cambridge International GCSE is used by many state schools for a number of subjects in their G9–10 curriculum and this has encouraged the adoption of these types of examinations by some states, adapting Cambridge syllabuses and examinations in a collaborative project.

22. Many states use non-state qualifications as “Incubators” of innovation and reform in their national education systems.

23. Cambridge is working with the *Egyptian* Government to provide curriculum and assessments services to pilot schools (Nile Egyptian Schools). It is intended that the schools will be completed and fully populated with approximately 1000 students each from ages 4 to 18 by 2016. The goal is, depending on the success of the pilot, to expand the new school model across the country.

24. The Schools will be not-for-profit, with the majority of funding coming from the Egyptian Government, extending access to families for whom private education is out of reach. They will offer continuous teacher training and professional development as well as English and Arabic-medium education through new curricula, benchmarked to Egyptian and international standards, with internationally accredited certificates at grade 10, 11 and 12 (ages 16 to 18).

25. Cambridge is also developing a tailor-made English curriculum for grades 1–8 (ages 6–7 to 13–14), specifically designed to fit with a bilingual international education programme, as well as producing curricula and assessments for up to 13 subjects for age 4–18, teacher and leadership CPD and specific inputs relating to institutional development.

26. In *Bahrain* Cambridge has focussed on the extensive revision of the national school exams system. This began several years ago with help in the setting up of a new National Examinations Unit tasked with raising quality in all aspects of the assessment process, including test item writing, operational processes involved in the distribution and marking of examinations, and the introduction of new technologies for the grading and analysis of test results. In 2012 the programme advances with the introduction of a new Critical Thinking pilot assessment for Grade 12 students.

27. In *Kazakhstan*, the government has set up a network of Nazarbayev Intellectual Schools (NIS), the first step in a wide-ranging programme of reform aimed at improving the quality of teaching and learning in schools in line with international best practice.

Cambridge, in partnership the University's Faculty of Education, is involved in advising the NIS on the strategy for innovative curriculum reform, the training of teachers in new pedagogies, and the move toward the establishment of a trilingual education system (Russian, Kazakh and English).

28. Finally, it is worth mentioning that in recent years the growth in multi-national industries and occupations has impacted “nationalistic” views of curriculum and accreditation provision. The growth of the European economic space and off-shore workforces have seen a rise in global certification programmes which can be integrated with National Curricula or used to extend their offering. This trend has been most noticeable in the IT sector with the rise of vendor-specific accreditation programmes: Microsoft (MCP, MCSE, MCTS, MCITP, MOUS), Novell (CNE, MCNE), Oracle (OCA, OCP, OCM), Sun (000–060), Adobe, Intel and a number of more generic IT programs such as ITQ, ECDL/ICDL, A+. Regardless of the provision available in national systems, more and more people are seeking qualifications with currency in a particular sector whoever may provide them.

#### CONCLUSIONS

29. Even in those countries which possess highly centralised systems for the delivery and development of assessments, qualifications, syllabuses and curricula, governments will actively either invite third party providers into the sector or engineer means of competition. In that regard the UK is extremely fortunate. It already has a mature, diverse and competitive market in place. That market allows for contestability, innovation and a diverse range of multi-layered partnerships to develop. This is one of the reasons why the expertise of UK exam boards is so readily sought by foreign governments and institutions.

#### 30. *Recommendations:*

- (a) The government should actively encourage the existence of multiple syllabus and examination providers;
- (b) The government should remove regulations that might reduce either the number of providers in either a single subject or across the entire qualifications sector;
- (c) UK regulators are given a statutory objective to encourage and remove barriers to competition and diversity of provision for assessments, qualifications and syllabuses;
- (d) The process of certification for qualifications should be made simpler and more transparent to encourage new providers and a more diverse catalogue of qualifications.

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#### Written evidence submitted by the London Mathematical Society

*A. The arguments in favour of having a range of awarding bodies for academic and applied qualifications (including A Levels, GCSEs, Diplomas, BTECs and OCR Nationals), and the merits of alternative arrangements, such as having one national body or examination boards franchised to offer qualifications in particular subjects or fields*

1. As the curriculum review has demonstrated, policy formation and analysis requires a *permanent core* of subject expertise within the Department, or in some related agency. If we had such focused expertise—whether centralised or distributed—one might assess the advantages or disadvantages of having a single awarding body or a range of such bodies.

2. The KS2 and KS3 SATs *used to* be developed by such a core group within QCA, and their expertise evolved over a number of years as a result of positive interactions with the wider community (including the academic community). This group was absorbed by Pearson Education and its work became commercially confidential. Similarly, awarding bodies such as AQA (previously NEAB, JMB) *used to* involve academics from the constituent universities and experienced teachers from schools; but the links with universities have been severed over the last 30 years, and teacher-involvement has changed markedly. As a result, those who contribute to the setting and marking processes no longer feel that their professional competence is being valued; and the process is increasingly driven by bureaucratic concerns relating to managing the (increasingly mechanistic) marking process, and by avoiding the need for candidates to “join the dots” for themselves.

3. So before one can debate the first of your three questions (A, B, C) we first need to ensure:

- (a) that the current awarding bodies are obliged to re-engage with teachers and with universities so that a pool of expertise can be slowly re-established; and
- (b) that the Department develops a pool of internal expertise in handling important subjects, and learns to interact with the wider community (including drawing on the expertise developed within the awarding bodies).

4. Whatever the outcomes of these two long-term projects, the essence of pluralism is that, where there is no single truth or competence, it is generally wise to allow variety, and to give each operator a degree of freedom so that we benefit from a degree of choice and innovation, avoiding the central imposition of inadequate solutions such as Curriculum 2000, or problems associated with the last KS3 SAT.

#### *B. How to ensure accuracy in setting papers, marking scripts, and awarding grades*

5. The problem lies not only with individual question parts, but with the overall quality of question papers. The current processes of setting and marking may well have been “administratively mechanised” in ways that

lead both to technical mistakes being overlooked and to a decline in the overall quality of question papers (because the preferred processes involve checking *procedures* rather than *content*—an observation which is linked to our response to A).

6. Examining is a craft rather than a science. Despite the temptation to use the outputs of assessment for political purposes, examination results are never wholly reliable. An effective system requires an effective bureaucracy. But an effective bureaucracy is not sufficient: one still needs competent professionals to exercise judgement—both at the setting/checking and at the marking stages.

7. The use and abuse of league tables has obscured this inescapable feature of assessment, and has misled journalists and the public by concealing the extent to which the numbers emerging from any assessment process are *artefacts*. And this is especially true where the assessment process is so strongly constrained by political determination to “drive up standards”.

8. For decades, concerned teachers have written to exam boards each year complaining (often with considerable justification) of “unfair” or inaccurate examination questions; and each year the exam board would consider carefully how to reply, and seek to learn whatever lessons needed to be learned. More recently such “errors” have often been communicated directly to the national press. It may well be that the number of serious errors is not very different from what it has always been, and that the real decline is in the general quality and demand of exam papers: we encourage the Committee to talk to awarding bodies and to critical ex-examiners to get an accurate picture of such trends.

9. What may be more serious is the impact on awarding bodies of excessive central pressures (from Ofqual etc) for their exams and their marking to be “fair”—which can lead to boringly predictable questions, and mark schemes which treat markers as automatons, who are expected to apply rules that run counter to their professional judgement. (For example, candidates are trained, when in doubt, to present two or more conflicting solutions in the hope that one of them might be marked correct—even though the candidate may have no idea which solution was correct.)

### *C. The commercial activities of awarding bodies, including examination fees and textbooks, and their impact on schools and pupils*

10. The London Mathematical Society continues to be concerned that increasing involvement of examination boards in preparation, endorsement and publication of textbooks is having a detrimental effect on secondary education.

11. We are alarmed that textbooks are prepared with contents limited to what is needed for a specific examination and then endorsed by the awarding body. Lacking depth and covering a limited range of subject material, such textbooks give students little incentive or opportunity to engage with broader and richer material; they do not foster an appreciation of their subject’s subtleties.

12. This practice results in reducing the intellectual endeavour of learning to a boring drill aimed squarely at passing the relevant examination; it narrows students’ horizons, sets for them false criteria of personal achievement, and de-professionalises teachers.

13. To this has recently been added another concern—namely the increasing involvement of examination boards in Continuing Professional Development (CPD) of teachers. This trend combines with the links between examination boards and production of textbooks to reinforce the tendency of “teaching to the test”. CPD sessions run by exam boards are likely to focus on explaining to teachers how to train students to maximise marks in exams set by their particular board, while a textbook endorsed by the same boards often restricts the teaching to coaching students for the relevant examination.

14. Teaching to the test is destructive in every subject area, but it is especially harmful in mathematics education. In the field of mathematics, the current National Curriculum Review and the forthcoming review of A Levels will not achieve the ambitious goals set by the Government without addressing this urgent issue.

15. The LMS will welcome amendments to the regulatory framework which would forbid involvement of the examination boards in production of textbooks, endorsement of textbooks, and the running of courses and events advertised or recognised in any way as “CPD”. In particular we would welcome an introduction of a rule (similar to the one existing in Civil Service) whereby senior employees and examiners from awarding bodies should be forbidden from publishing educational material, or from benefitting materially from “exam-linked CPD” during their employment by an awarding body and for a specified period after the termination of their contract.

### ABOUT THE LONDON MATHEMATICAL SOCIETY

16. The London Mathematical Society, <http://www.lms.ac.uk/>, is the major UK learned society for mathematics with an international membership. The Society’s main activities include publishing journals and books, providing grants to support mathematics and organising scientific meetings and lectures. The Society is also involved in policy and strategic work to support mathematics and the mathematics research community.

This work includes engaging with government and policy-makers on mathematics education and research, participating in international mathematical initiatives and promoting the discipline.

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### Written evidence submitted by Girls' Day School Trust (GDST)

The GDST (Girls' Day School Trust) welcomes the opportunity to submit evidence to the Education Select Committee's inquiry on how exams for 15–19 year olds in England should be run.

#### ABOUT US

1. The GDST is the UK's leading network of independent girls' schools, with nearly 4,000 staff, and 20,000 students between the ages of three and 18. As a charity that owns and runs a network of 24 schools and two Academies in England and Wales, we reinvest all our income in our schools. Founded in 1872, the GDST has a long history of pioneering innovation in the education of girls.

#### EXAMINATION SYSTEM CONCERNS

2. We are sure that many of our concerns about the present examination system and potential solutions will be echoed by other organisations submitting evidence, so our contribution concentrates on our disquiet at the influence exerted by exam boards' lobbying activities on the national educational debate, and the ambiguous ethics and conflicts of interest potentially represented by the boards' commercial activities.

#### ARGUMENTS IN FAVOUR AND AGAINST HAVING A RANGE OF AWARDING BODIES

3. There are some distinct *advantages* to having multiple awarding bodies and exam boards in the UK education system.

4. If only one exam board existed we believe that it would in effect act as an arm of the government, prey to political pressure, and susceptible to one-size-fits-all solutions. We believe that it is the role of the state to set broad education strategy, not to decide on the content of specifications, or determine the questions in exam papers.

5. There is currently some genuine competition, not particularly on price, but certainly in terms of innovation; we don't believe that qualifications like IGCSE, Cambridge Pre-U or the AQA Bac would have been developed by a single monolithic exam provider.

6. The big *disadvantage* is that the existence of several powerful and wealthy exam boards has led to the growth of a very powerful examination lobby, with a vested interest in maintaining the *status quo* of expensive, high-stakes exams, even when the original justification for those exams (particularly at age 16) is becoming redundant.

7. This means that the best option for reducing costs—cutting down on the number of exams, or doing away with some of them entirely—is rarely up for discussion. Rather, politicians, civil servants and educators tweak the existing system—discussing what's in and what's out of the EBacc, or whether IGCSEs count towards school performance tables or not—rather than considering more fundamental, systemic changes.

8. For example, the National Curriculum Review's terms of reference do not allow it to consider whether GCSE exams are needed at all (thereby disregarding the dissonance between government policies to ensure that education or training continues to 18 and the existence of summative exams at 16).

9. The irony is that it is taxpayers who are indirectly paying for the exam boards' influence. The taxpayer (via the Department for Education) funds schools, the schools pay exam boards for exams and ancillary services (including textbooks, training and other commercial activities), the exam boards generate substantial profits or surpluses, a significant proportion of which is spent on influencing politicians and civil servants.

10. It has become a self-perpetuating cycle and it is taxpayers, schools and pupils who are getting a raw deal.

11. There is no similarly well-funded and organised lobby putting the case to support and reinforce deep learning and progression via alternative, less powerful exams, and for a less intrusive (though no less rigorous) testing regime with, for example, fewer set papers, or GCSEs with non-fixed teaching hours.

#### ACCURACY

12. To improve accuracy, we would suggest that more practising teachers (rather than those who have retired from day-to-day teaching or who have never been teachers) get involved in exam setting and marking. There has, in recent years, been a decoupling of teaching from examining, and this is not a trend we welcome.

13. Increasing administration and modularisation has also led to mark schemes becoming more rigid, and this has a detrimental effect on pupils' passion and progression—exams become about set phrases that tick boxes rather than showing what you really know about a topic.

14. At the same time, module grades and UMS scores are made available to candidates, schools and to some universities, and increasingly high demands are placed on the achievement of specific grades for both candidates' University prospects and schools' performance rankings. Given that marking and grading involves a great deal of professional judgement, there is a danger that fine distinctions might be made between candidates and schools on the basis of differences that fall well within the margin of error.

#### COMMERCIAL ACTIVITIES

15. The leveraging of profit from exams is endemic to the current system. It is not only the quantity of exams that increases the cost to schools, but also the ancillary activities of the exam boards.

16. Examples include exam boards running courses on how to get the best grades, the endorsement of textbooks written by examiners for the exam boards (which is in our view a conflict of interest, not least in the lack of incentive to make improvements to syllabuses).

17. Again the impact on schools is to ratchet up costs and narrow the options.

Thank you again for the opportunity to contribute to this important discussion. We look forward to the outcome of the Select Committee's deliberations and would be happy to provide further input.

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### Written evidence submitted by Mathematics in Education and Industry (MEI)

#### SUMMARY

1. Mathematics in Education and Industry (MEI) is an independent curriculum development body for mathematics, with over 40 years of experience of designing syllabuses and exam specifications and associated teaching materials for A Level, O Level, GCSE, FSMQs, the Advanced Extension Award and STEP.

2. We are convinced that the freedom to innovate must be preserved in order to ensure that examinations, and the associated curriculum, can develop over time to serve the changing needs of students and society.

3. Although the scope of the current inquiry does not extend to the design of particular current or future qualifications, we believe that possible changes to the system can only be analysed in the context of their effects on the qualifications that will be offered and on the resulting taught curriculum.

4. We recognise that the current administration of examinations is not perfect and that there are problems which need to be addressed and solved. It is suggested that having a single national Mathematics GCSE (and a single Mathematics A Level) would solve some of the problems. However, we believe that such a "solution" would effectively remove the impetus for curriculum development and raise the possibility of a descent to the lowest common denominator in terms of the richness of educational provision. We believe this will lead to a lowering of the standard of mathematics learned in our schools.

5. Accuracy in setting and administering examinations is best ensured by having awarding bodies which have long experience in examining and which also compete professionally with other awarding bodies. The recent, regrettable errors have produced a determined response from the awarding bodies to ensure accuracy and reliability.

6. Effective methods of regulation are needed to ensure comparability of standards between specifications. This requires a different model from the current Ofqual model. For example, an alternative model for regulation is suggested in section 11.3 of *A World-class Mathematics Education for all our Young People* (the Vorderman report).

7. Awarding bodies and those who set their examinations hold a privileged position. They should not be compromised by gaining financially from endorsing textbooks. Marketing should not trade on authors' status as examiners.

8. A single awarding body with a national monopoly would have no incentive to hold down the cost of entering examinations. It is essential that the cost of entering examinations is manageable for schools and colleges.

#### THE IMPORTANCE OF CURRICULUM DEVELOPMENT

9. There is a long and distinguished history of independent curriculum development in this country. In mathematics, SMP and, more recently, MEI took the lead and there have been other initiatives in science and technology such as Nuffield Science and Salters Chemistry. As a result many people in UK schools and colleges have benefited from a rich education.

10. It is essential that the school mathematics curriculum takes account of the need for students to be able to use mathematics to model real world situations. Developments in ICT will continue to change the way that mathematics is used in HE and in the workplace. This should be reflected in the school curriculum and the associated examinations. Consequently, there is a continuing need for curriculum innovation.

11. There is an urgent need for curriculum development in mathematics to ensure that suitable qualifications are available for an increased numbers of student to study appropriate mathematics between the ages of 16 and 18, in line with the recommendations of the Wolf Report, the ACME Mathematical Needs Project and the Vorderman report.

12. There is currently increasing freedom for schools to make choices about how they teach their students. In order for schools to make use of this freedom, for the benefit of their students and society, they need to have access to a variety of teaching materials and examinations. Better still, their teachers need to be able to contribute to the development of suitable teaching materials and examinations. That opportunity has historically been provided by independent curriculum development organisations.

13. Successful curriculum developments in the past have brought an overall vision for education to the integrated development of examination specifications and teaching materials. Such initiatives have provided valuable opportunities for teacher professional development and resulted in enhanced teaching and learning in the classroom.

14. Awarding bodies cannot conduct such curriculum development on their own. Their expertise is in the setting and administration of examinations. Awarding bodies working together with other organisations and individuals, including teachers, HE and employers, have been able to develop high standard curriculum materials for students.

15. If the number of awarding bodies responsible for mathematics was reduced to one, it would be essential to impose a statutory duty for that body to engage in curriculum development. There should be a statutory duty for such a body to offer a variety of specifications in major subjects, such as mathematics, and to offer specifications devised by responsible outside organisations.

#### ONE OR MORE AWARDING BODIES?

16. There is pressure on schools and teachers to ensure that students get good grades in mathematics. The emphasis on grade C, or better, at GCSE has led to some schools adopting practices which help the school to improve its position in performance tables without improving the overall mathematical understanding of its students. Some schools currently engage in the following practices:

- Entering students for more than one Mathematics GCSE examination at the same sitting.
- Early entry for GCSE when that is not in the best interests of students.
- Trying to find an “easier” specification.
- Giving additional attention to students at the C/D borderline at the expense of other students.

17. MEI recommends that the practice of entering students for more than one Mathematics GCSE at the same time be disallowed.

18. Awarding bodies need to gain sufficient market share in order to cover the costs of running a specification. When this is taken together with the desire of some teachers to find an easier specification, it can result in a downward pressure on standards. An effective regulatory system must address this concern.

19. Awarding bodies can compete with each other in a number of ways. Some of these are positive, bringing benefits for schools and students:

- Support for teachers and students.
- Quality of administration.
- Price.
- Quality of examinations.
- Providing a specification suited to the aspirations of the students or the philosophy of the centre.

However, awarding bodies can also compete with each other by producing examinations which are perceived to be easier. An effective, transparent regulatory system should eliminate competition in this area.

20. There have been some recent errors in examinations and suitable checks need to be made to minimise the possibility of future errors. There have always been errors in examinations but they have not always received widespread publicity. However, the awarding bodies responsible for general qualifications have a great deal of experience in setting examinations successfully. Their long term involvement in the process and competition from other awarding bodies ensures that they take the quality of their provision seriously. A monopoly would reduce standards because it would remove the possibility of schools going elsewhere if the quality of examinations and administration were inadequate.

#### REGULATION

21. Much of the emphasis of the current regulatory framework, as applied to GCSE and GCE Level Mathematics, lies in ensuring similarity of content between different specifications. However, there is an advantage in having specifications which emphasise different aspects of best practice. This allows schools to

use syllabuses which meet their students' needs and aspirations and so inspires more students to continue with STEM subjects.

22. The regulatory system must ensure comparability at various levels:

- (a) between the different awarding bodies offering examinations on similar specifications for the same qualifications in the same subjects;
- (b) between different specifications for the same qualification in a subject; and
- (c) between qualifications at the same level in different subjects.

23. At the moment regulation definitely fails in 22c. There is plenty of evidence that some subjects are more harshly graded than others. For example, the 2008 CEM Centre Report *Relative Difficulty of Examinations in Different Subjects* <http://www.cemcentre.org/attachments/SCORE2008report.pdf>

24. The STEM subjects fare particularly badly and this makes them unattractive options for any but the strongest students. It is nothing short of a national scandal that this situation has been allowed to persist over many years, and particularly since the introduction of accountability measures that are based on the assumption that all subjects are, grade for grade, of equal difficulty.

We fear the possibility that different specifications for the same qualification will be disallowed on the grounds that it is difficult to ensure comparability, while completely ignoring the much bigger challenge of ensuring inter-subject comparability. It is a matter of national importance for the regulatory authorities to develop a methodology that better allows comparison of standards in different subjects.

When that is done, it will then be relatively easy to adapt it to different specifications in the same subject.

25. A key element in all this will be the use of high calibre people with appropriate experience and expertise. Such people need sufficient expertise to ensure that learning outcomes are adequately addressed and that difficult topics are not avoided in examinations. The current system of assessment objectives does not work.

#### THE COMMERCIAL ACTIVITIES OF AWARDING BODIES

26. Since the content of all the GCSE Mathematics specifications from 1999 to 2009 was identical, following the wording of the National Curriculum, any GCSE Mathematics textbook could have been used to teach any specification. However, there was a marked preference for using an awarding body endorsed book. This may well be linked to using the examiners as authors and publicising the fact; there is a thinly veiled message "This is how you get the marks on this examination". We believe this practice to be profoundly wrong.

27. Poor mathematics textbooks focus on techniques rather than concepts; they do not adequately address applications, mathematical thinking and real understanding. Their success in the marketplace is all to do with the pressure for examination results with the associated perception that they are more important than students' understanding of mathematics.

28. Where an examiner is an author or co-author of a textbook, publishers should be disallowed from mentioning the fact in the book or in any of their publicity. Similarly, awarding bodies should be disallowed from publicising the fact.

29. It is helpful for awarding bodies to indicate to teachers which books are suitable for use when preparing candidates for a specification. However, awarding bodies should not gain financially by endorsing textbooks, nor should their logos appear on any textbooks.

November 2011

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### Written evidence submitted by the Centre for Market Reform in Education

#### 1.1 INTRODUCTION

The purpose of this memorandum is to bring to the Select Committee's attention a research project commencing this month considering the case for structural reform of the 14–19 examinations system. This briefing contains an executive summary of the research, a chapter outline of the content proposed, some of the literature that will provide the starting point for the study, and details of the intended outputs and timeframe for the study. It is the Centre's intention to publish an initial discussion paper in February 2012 addressing the purpose of 14 to 19 qualifications and unpacking the terms of the standards debate, though the final monograph is not likely to emerge before the end of the year. Those undertaking the research (myself and another to be appointed) will be available to give oral evidence to the Committee as required.

#### 1.2 EXECUTIVE SUMMARY

This paper will seek to clarify the core purposes of examinations at the 14–19 stage and whether increasing government influence over the system has not undermined public confidence in it by 1) emphasising learners' needs in assessment at the expense of end-users; and 2) through the increasing use of assessment data to support conclusions about school quality that go beyond the inferences that the tests are designed to support

(ie about pupils' attainments). It tests the thesis that government interventions to improve school performance and educational opportunity (which generate a political pressure of their own to demonstrate equality of outcome) have opened up a rift between the producers of 14–19 examinations and their end-users, resulting in a de-valuation in the currency of qualifications at this level. So long as government determines the content of the curriculum and the means and objectives of assessment, the benefits that might ensue from having several exam boards are limited. A fully de-regulated system, extending boards' powers as far as curriculum design, brings the added benefits of specialisation, competition and market contestability.

### 1.3 RESEARCH OUTLINE

1. The purposes of assessment: who and what are qualifications for?
2. Public qualifications: the theory:
  - (a) the case for regulation—regulation as the means by which public confidence in exams is assured (whether concern is chiefly standards or equality of educational opportunity); including an international survey of different systems
  - (b) the role of exam boards—understanding the success of the Finnish system (based on a single Matriculation Examination Board), and that of Singapore (the Singapore Examinations and Assessment Board (SEAB), which is moving towards greater regulatory control/centralisation; contrasted with drivers of system devolution in Germany
3. How do you guarantee standards if there is no independent arbiter/market? What do we mean by “standards”? How would you know if they are in decline?
4. Consumer pressure on standards: the impact of greater transparency, accessibility and guidance from exam boards in assessment delivery
5. Private qualifications: an alternative framework:
  - (a) the importance of competition and market contestability : some economic theory on how competing brands provide quality assurance and have an inherent resistance to pressure from consumers to compromise on standards.
  - (b) how the politics of government intervention upsets the balance between the awarding body's interest in rigorous evaluation (safeguarding its reputation, ensuring its judgements are respected) and the importance of the verdict for those being evaluated; case study on the credit rating agencies and comparison with exam boards:

Thesis: governments' interventions to ensure equality of educational opportunity (measured in terms of equality of outcome) have contributed to a de-valuation in the currency of 14–19 academic qualifications and undermined the confidence of employers and universities.
6. The history of independent qualifications in the UK—specifically the RSA, City and Guilds, professional qualifications, O and A level boards. How widely used they were, how they maintained their reputations (in the case of O and A boards, through the influence of universities), how (especially in the case of City and Guilds) they lost their independence, and what the consequences have been.
7. The history of regulation in the UK. How increasing govt control over the aims and content of the curriculum, and how it should be taught, correlates with increased govt control over exam boards (QCA, QCDA, development of QCF/equivalence) and growth of the apparatus of accountability (use of targets, league tables, exam outcome-focused inspection). The need for govts to be shown to be making a difference.
8. A look at some international examples of robust private qualifications that have maintained their integrity and currency and an examination of the principles that have enabled them to do so: self-regulation, brand, professional associations and market contestability
9. Consideration of objections: are market mechanisms enough for maintaining credible standards?
10. Towards system devolution—proposals for de-regulation of UK exams market.

### 1.4 INITIAL LITERATURE SURVEY

- Archer, M S (1979) *Social origins of Examination Systems* (Sage London).
- Bassett, D, Cawston, T., Thraves, L. and Truss, E. (2009) *A new level* (Reform).
- Bassett, D, Haldenby, A and Tryl, L (2009) *Core business* (Reform).
- Boyle, A (2008) *The regulation of examinations and qualifications: An international study* (Ofqual).
- Broadfoot P M (1996) *Education, Assessment and Society* (OUP Buckingham).
- Cambridge Assessment (2010) *Exam Standards: the big debate* (Cambridge Assessment).
- Montgomery, R (1965) *Examinations: An Account of their Evolution as Administrative Devices in England* (London: Longmans, Green & Co).

Newton, P (2007) “Clarifying the purposes of educational assessment” in *Assessment in Education*, Vol. 14, No. 2, July 2007, pp. 149–170.

Steinberg, B (2002) “Examination boards: regulatory overkill or pattern for the future?”, *Economic Affairs* (March).

### 1.5 PROPOSED OUTPUT

1. An IEA discussion paper (web-based) (subject to IEA review process).
2. A paper in *Economic Affairs* and/or other journal (print) (subject to University of Buckingham review process).
3. An IEA Monograph (print) (subject to IEA review process).

### 1.6 TIMETABLE

02/2012 IEA discussion paper.

03/2012 paper in *Economic Affairs* and/or other journal.

06/2012 draft for review.

12/2012 publication.

November 2011

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### Written evidence submitted by the NISAI Group

There are two elements to gaining qualifications.

Firstly, there is the written and timed examination.

However, just as importantly, there is also coursework that needs to be written and submitted. This coursework can often contribute towards a significant percentage of the overall examination mark for a student. In addition, it is impossible for a young person to pass a qualification without completing both parts.

### THE ISSUE

Before the introduction of “controlled assessments” students undertook an exam and the coursework was marked internally with a percentage of random sample scripts being sent to the Awarding Body for verification.

In 2009, “controlled assessments” were introduced.

Controlled assessments mean that each student has to complete work under supervised conditions. In addition, the work has to be completed within a specific time frame although within this, individual dates and times can be scheduled by the school. This work is then marked by the school and sent to the Examination Board for verification.

If a child is within mainstream education, and perfectly healthy, then it is within the framework of both their everyday life, and that of the institution they are enrolled in to complete these controlled assessments within their school timetable.

However, there are a number of children who are not within the mainstream system who need to be considered with respect to this change.

Indeed:

- 1 in 10 children from 5 to 16 suffer from a diagnosable mental health disorder.<sup>17</sup>
- Current overall absence in schools is currently 5.42%.<sup>18</sup>
- The latest figures (April to June 2011) show that overall the number of NEETs has risen to 979,000, the highest second quarter figure for five years.<sup>19</sup>

These children are not able to be easily included in the current frameworks of controlled assessments. This means that there is a real possibility that they will not be able to complete the qualifications they need to be able to develop and contribute economically to society. Instead, it condemns them to being part of the ever increasing issue of NEETs. According to the Cabinet Office, the cost per NEET is £56,000. This means that the cost of NEETs has now risen from £31 billion over their lifetime,<sup>20</sup> to £54 billion.<sup>21</sup>

<sup>17</sup> <http://www.youngminds.org.uk/ym-newsroom/media-resources/fast-facts>

<sup>18</sup> DfE: Statistical First Release—Pupil Absence in Schools in England, Spring Term 2011.

<sup>19</sup> Pearson Centre For Policy and Learning—Pocket Watch: Latest NEET Statistics.

<sup>20</sup> <http://www.newstartmag.co.uk/news/article/report-reveals-31bn-cost-of-neets>

<sup>21</sup> <https://www.innovationlaunchpad.cabinetoffice.gov.uk/Page/ViewIdea?ideaId=484>

If there is any chance of educating these children and them being able to access and pass qualifications, then a new resolution needs to be made.

#### CURRENT SITUATION—THE SITUATION SURROUNDING PRIVATE CANDIDATES

Private candidates are asked to undertake all elements of controlled assessment, including writing-up sessions and research and analysis sessions. Indeed, all elements with high or medium levels of control must be undertaken within the centre, or externally with centre supervision eg a field trip. The timings of these sessions can vary but writing-up sessions can be as long as 6 hours and research and analysis sessions can be as long as 20 hours. In addition, controlled assessments have to be taken within a specified time—usually between 26 April and 3 May—and the coursework then has to be marked and sent to the Examination Board for monitoring.

However, young people that are not in mainstream education are outside the system for a reason, whether it be because of emotional or health issues. In the case of students that are outside mainstream education and studying using any number of online tools—including the Nisai Virtual Academy (<http://www.nisai.com/>), students have to register as private candidates—(currently many schools/centres will not accept private candidates due to the burden of additional marking that is placed upon their teachers) and once registered as a private candidate, students need to attend a centre (often at some distance) or arrange for home invigilation for such controlled assessments. This can be very stressful for the student as well as expensive for parents. An additional issue is that if a student is ill on the day of the controlled assessment, many schools are refusing to reschedule.

This means that restricting these young people to the stringent rules of controlled assessments can only negatively affect their prospects.

In addition, the OFQUAL website is perplexing. The information they have posted on their website includes the statement that: “Candidates who are excluded from mainstream schooling, for whatever reason, can sometimes still undertake Controlled Assessments, provided suitable arrangements for supervision, authentication etc can be made. Contact us as soon as possible.” However when contacted, OFQUAL have not only been slow in responding but negative in their support, as can be seen below.

#### ISSUES SURROUNDING THE RULING

##### *General Exclusion Issues*

The Nisai Group has tried to work out exactly how this can help their students to achieve their qualifications. Writing to clarify the situation, they waited 3+ months. When OFQUAL finally responded they said that the rules could not be bent in any situation.

Inevitably, this will mean that medically ill students will be excluded from the mainstream exam system, and that this ruling will only increase hardship for those students who are already suffering severe medical issues, and who have no reasonable expectation of leaving home or hospital to fulfill what could only be described as bureaucratic requirements.

##### *Discriminatory Issues*

There are serious discriminatory issues surrounding this policy decision meaning that, because a student has disabilities, they cannot be accommodated within the existing requirements.

##### *Practical Issues*

The issue is further compounded by the fact that as a private candidate, if the student does manage to get to a sympathetic school, it is often the case that the school they use to complete the controlled assessment refuses to mark the coursework if they are not a student at that school. In the case of AQA they have also said they are unwilling to mark the coursework even if the Nisai Group pay them. Finally, the Nisai Group is unable to mark the assessment either -even though they are an exam centre for EDEXCEL and JCQ. This means that though the coursework has been done, it will not be marked, forcing already disadvantaged students to fail. This means that even once private students have done the controlled assessments, there are still hoops for them to jump through.

#### RESPONSE OF THE GOVERNMENT TO THE ISSUES

The Government still do not have a clear picture on how many children are homeschooled or outside of mainstream education.<sup>22</sup> In addition, it is obvious from the following answer given to David Morris MP that the Government has not made substantial assessment of the effects that this legislation has had on those children not inside mainstream education.<sup>23</sup>

David Morris (Morecambe and Lunesdale, Conservative): To ask the Secretary of State for Education what assessment he has made of the effect of the rules on controlled assessment of GCSE courses on disabled

<sup>22</sup> <http://www.theyworkforyou.com/wrans/?id=2011-03-15a.43142.h&s=%22home+schooled%22#g43142.q0>

<sup>23</sup> Hansard, HC Deb, c1258W, 24 March 2011.

children undertaking distance learning who experience difficulties in attending examination centres; and what estimate he has made of the number of such children there were in the latest period for which figures are available.

Nick Gibb (Minister of State (Schools), Education; Bognor Regis and Littlehampton, Conservative): Controlled assessment was introduced into GCSEs in most subjects in 2009. We are aware that it is causing significant issues for schools, colleges and students and we are working with the independent regulator, Ofqual, and with awarding organisations on what can be done to address these issues.

The Department does not collect information on the number of children with special educational needs undertaking controlled assessment as part of a GCSE examination.

#### WHAT NEEDS TO BE DONE

The government needs to work alongside OFQUAL to make sure that any position they put on their website is accurate as opposed to misleading. This ensures that those who are affected with exclusion issues understand their position completely as opposed to assuming there can be exclusions to the dictat. With that in mind, the wording on the website needs to be changed to read “There are NO exceptions to this requirement” so that future private candidates are not misled into thinking that “suitable arrangements” can be forthcoming. However, we would request that OFQUAL be supportive of and make allowances for those who, through no fault of their own, are unable to adhere to the system.

There should be a standard marking procedure for the work of private candidates. Controlled assessments fundamentally restrict disabled children on every level and this needs to be resolved in new frameworks for those children not within mainstream education. The government must resolve this situation in order to ensure that there are options for private students. This could include arrangements being made with examination boards that do not require controlled assessments for their exams, such as IGCSE.

November 2011

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### Written evidence submitted by the Association of Colleges (AoC)

#### WHAT IS AoC?

The Association of Colleges (AoC) represents and promotes the interests of Colleges and their students. Colleges provide a rich mix of academic and vocational education from basic skills to higher education degrees. AoC represents and promotes the 347 Colleges in England incorporated under the Further and Higher Education Act 1992, including 94 Sixth Form Colleges and 253 Further Education Colleges.

Colleges play an important role in diversifying the education system, in providing a breadth of high-quality choices for young people and in preparing them for higher education and adult life. Colleges educate 861,000 young people aged 16 to 18, twice as many as schools.<sup>24</sup> This includes 188,000 young people taking A-levels and 673,000 young people aged 16 to 18 taking vocational courses.<sup>25</sup> Colleges also train approximately one quarter of the total 491,000 apprentices.<sup>26</sup>

In addition, they have a growing role in the education of those of compulsory school age, including 59,500 14 to 15 year olds taking part-time courses and 3,500 studying full-time.<sup>27</sup>

Thirty two Colleges are now involved in sponsoring Academies, 18 as the main and sole sponsor.<sup>28</sup> Colleges account for 38% of entrants to higher education.<sup>29</sup>

*The arguments in favour of and against having a range of awarding bodies for academic and applied qualifications (including A Levels, GCSEs, Diplomas, BTECs and OCR Nationals), and the merits of alternative arrangements, such as having one national body or examination boards franchised to offer qualifications in particular subjects or fields*

1. Colleges educate over 900,000 young people and prepare them for adult life. Qualifications are used by College students to continue to higher education or secure employment. The awarding bodies who offer these qualifications act as suppliers to Colleges in their drive to raise standards and reduce costs.

2. To some extent, a broad range of awarding bodies provides a choice for Colleges and for their students, particularly in specialist areas and where there is a need for particular skills to progress to a university, a profession or trade. The income stream that the awarding bodies attract allows them develop qualifications which have fewer applicants and develop a varied and wide body of knowledge.

<sup>24</sup> AoC analysis of Individualised Learner Record 2009–10; DfE Statistical First Release—Participation in Education, Training and Employment by 16–18 year olds in England, June 2011

<sup>25</sup> AoC analysis of Individualised Learner Record 2009–10

<sup>26</sup> The Data Service analysis of Individualised Learner Record Data 2009–10

<sup>27</sup> AoC analysis of Individualised Learner Record 2009–10

<sup>28</sup> DfE list of open academies at September 2011

<sup>29</sup> UCAS dataset of Applicants and Acceptants in England for 2010 entry

3. However, Colleges report considerable concerns about the way in which the qualification market works both in terms of quality and efficiency. The market for qualifications is lucrative particularly in schools. The perverse incentives provided by performance tables to deliver vocational qualifications in schools, which was identified as a problem in the Wolf review, led to poor advice to students and difficulties for them when progressing to post 16 education. Ofqual needs to monitor growth in awarding organisation activity to ensure that students' interests are paramount.

4. AoC's 2010 report on exam expenditure<sup>30</sup> confirmed that the total exam fee bill for Colleges had risen to £196 million in 2009–10. This amounts to 4% of the funding Colleges receive from Government. Colleges do not disaggregate their income and expenditure by age group but we estimate that England's Colleges spend more than £100 million a year on qualifications for 15–19 year olds. Our report identified a number of additional concerns on exam costs which went beyond the headline costs:

- Fees and total costs continue to rise even when work has been transferred back to Colleges (for example, in relation to course assessment and on-line registration). Fees paid to awarding bodies represent only part of the total costs of testing students, with costs of invigilation, assessment, on-line testing and general overheads associated with the provision of exams potentially doubling the full costs.
- The nature of College students, and the fact that state education is free for those aged under 19, means that price rises directly affect the funding available for teaching and learning. Some Colleges pass on fees for re-sits and re-certification fees but others waive these fees owing to the fact that some students are unwilling or unable to pay.
- There is a perception from Colleges that fees for late registration, and other extra charges, have risen faster than standard fees. We examined this in another report which concluded that some awarding bodies are using late fees as a form of profit-maximising price discrimination (in the way they are used in product-rental or travel industries).<sup>31</sup>
- There are considerable costs in changing a qualification to a different awarding body because of the need to learn new rules, change teaching materials and assessment methods. 63% of Colleges have not changed any of their main awarding organisations in the past five years.
- There is a consistent upward pressure on qualification costs because of Government funding and qualification regulations. These cost pressures appear to wipe out any savings from new technology.

5. In 2010 AoC compared the English awarding bodies to the Scottish Qualifications Authority (SQA) and reached the following conclusions:

- The cost per entry for the equivalent qualifications in Scotland's College sector is much lower than in England
- Late fees charged by SQA are a standard charge agreed annually and reflect the cost of late entries rather than a financial punishment for late registration.
- Scotland's Colleges pay a smaller percentage of their income to Awarding Bodies (3.1%) compared with 4.0% in England (2008–09)

**Table 1**

FEES PAID TO AWARDING BODIES IN ENGLAND AND SQA  
IN SCOTLAND BY COLLEGES

<i>Year</i>	<i>England*</i>	<i>SQA Scotland</i>
2005–06	£170m	-
2006–07	£178m	-
2007–08	£180m	£9.6m
2008–09	£192m	£10m
2009–10	£196m	£10.1m

\*[www.aoc.co.uk/download.cfm?docid=28B0D0E2-C8E3-4557...](http://www.aoc.co.uk/download.cfm?docid=28B0D0E2-C8E3-4557...)

6. The SQA model, whilst attractive, is underpinned by Government investment and has drawbacks in terms of the ability of a single national awarding organisation to respond in the way which English awarding bodies do. However a national commissioning agency for general qualifications, working with franchised awarding organisations, might lead to reduced costs to Colleges. General qualifications have greater uniformity and do not need to reflect employer needs in the same way as vocational and occupational qualifications.

7. AoC has carried out work to investigate alternative models for organising assessment as part of work we have done with the Skills Funding Agency on shared services. In a 2011 report, we looked at the feasibility of changing the market for qualifications for those aimed at those over 19.<sup>32</sup> The report has relevant lessons

<sup>30</sup> <http://www.aoc.co.uk/en/policy-and-advice/funding-and-finance-pensions/audit-tax-licensing-compliance/exam-fees.cfm>

<sup>31</sup> <http://www.aoc.co.uk/en/policy-and-advice/funding-and-finance-pensions/audit-tax-licensing-compliance/exam-fees.cfm>

<sup>32</sup> <http://www.aoc.co.uk/download.cfm?docid=AAB299FD-F6F4-4FAF-8D2BD86E4DD97300>

for 15–19 education and for what might be possible for other education institutions. The models and the conclusions were:

- There is no appetite in Colleges individually or collectively to develop a new awarding body because it will distract them from their core work, because of the costs and risks involved and because of concerns about securing currency given the long histories of existing awarding bodies and difficulties managing possible conflicts of interest.
- There was some interest in joint ventures between Colleges and an awarding body.
- There was considerable interest in measures to make the existing market work better and securing government help to do this.

8. Colleges and schools face a difficult time financially as a result of the reductions in public expenditure. A report from the Institute of Fiscal Studies concluded that the real-terms reduction in spending on 16–18 education of 20%<sup>33</sup> was greater than reductions in other areas of the education budget. In these circumstances, the £196 million costs of examinations and qualifications are an important issue, particular as fees continue to rise despite the savings that should be available from new technology and placing greater reliance on internal systems.

9. The Government intends to make Colleges and schools more accountable to students and parents through the provision of transparent and comparable public information. This year the attainment tables for schools included a calculation of how much each institution had spent on each of its activities. There are proposals to make information available to the public within the College sector which will include success rates, student destinations and learner and employer satisfaction. In the same spirit we are keen to see a comparison website, hosted through Ofqual, which allows awarding organisations to be compared on both cost and customer services.

#### *How to ensure accuracy in setting Papers, Marking Scripts, and Awarding Grades*

10. We agree that Ofqual's role should be to regulate awarding bodies rather than individual qualifications. We believe this is the most effective way of controlling a complex market with large organisations running a wide variety of services.

11. In May 2011 Ofqual launched the *Criteria for Recognition* and the *General Conditions of Recognition*. These have their basis in the Apprenticeships, Skills, Children and Learning Act 2009 and are, therefore, legally enforceable requirements.

12. The *Criteria of Recognition* specify the requirements of any organisation that wishes to become recognised as an awarding body. Existing awarding bodies who wish to expand the scope of their recognition will also be required to provide evidence of how they meet the *Criteria for Recognition*.

13. The *General Conditions of Recognition* apply to all awarding bodies that are currently recognised by Ofqual to award regulated qualifications. All awarding bodies will need to notify Ofqual of their compliance with these *Conditions* by 18 May 2012. Any awarding body that does not make this notification within the required timescale will not be recognised to continue to award regulated qualifications. Ofqual will require a notification of compliance from each awarding body on an annual basis by May 2012.

14. AoC considers this a robust system which provides transparency, clarity and the ability for Ofqual to act when there is non-compliance.

15. An immediate issue in summer 2011 has been the increase in the number of errors in exam scripts. We provided evidence to a recent Ofqual inquiry which noted that the number of errors was relatively small but which encouraged Ofqual to ask awarding bodies to act faster when discovered. Specifically, we think there should, where feasible, be immediate action on the day of the examination, and subsequent follow up, if an error is discovered. We believe a consistent approach is needed for all similar examinations.

16. We are concerned that appeals against awards are costly and therefore we would like to see a standard reasonable cost. Although at first this might increase the number of appeals, in the fullness of time it may well decrease the number as centres begin to understand the rulings and advise candidates before an appeal.

#### *The commercial activities of Awarding Bodies, including Examination Fees and Textbooks, and their impact on Schools and Pupils*

17. At its simplest, there are three distinct roles in assessment:

- Standard setting
- Teaching
- Awarding of qualifications

18. There are sometimes good reasons to run two or even all of these roles in a single organisation but, in principle, we believe they should be organised distinctly.

<sup>33</sup> <http://www.ifs.org.uk/bns/bn121.pdf>

19. Universities hold all three roles in one organisation but do so within a long-established, reasonably well-regulated system of quality assurance backed up by the Quality Assurance Agency (QAA) and external examiners.

20. In some specialist areas, Sector Skills Councils such as Construction Skills, are responsible for all three activities but with a clear separation of roles and governance structures to protect the public interest.

21. The protection of the public interest in both cases is secured partly through the fact that universities and Sector Skills Councils are public benefit organisations with charitable status and under the remit of independent regulators.

22. Applying lessons from related areas to the provision of 15–19 qualifications, we have the following concerns:

- The inefficient way in which qualification provision works allows awarding bodies to generate assessment surpluses but there is no separate disclosure or regulation of these because of the varied ownership and status of awarding bodies. Edexcel is owned by a PLC (Pearson), OCR is owned by the University of Cambridge, AQA is a registered charity, while City and Guilds is a charity with a Royal Charter.
- It appears that some awarding bodies may be using their assessment surpluses to invest in building up education and training provision or cross-selling between distinct activities in a way that could compromise the validity and confidence in their assessment. Pearson and City and Guilds have both recently expanded their apprenticeship training provision. There is investment by several awarding bodies in online publishing of teaching materials to support their qualifications
- There does not appear to be a link between different strands of Government regulation of the assessment activities of awarding bodies and their education/training activities. Pearson's assessment activities are regulated by Ofqual; its apprenticeship provision is inspected by Ofsted and funded by the Skills Funding Agency while its higher education teaching and assessment will be regulated by the new higher education regulator (subject to planned higher education legislation).

23. It is important to state that we have no specific evidence of systemic abuse arising from the weaknesses we identify but we do think it would be better to act on this issue now rather than wait until something happens. For all the problems we diagnose, there is considerable public confidence in the existing qualifications and considerable benefits for students, parents, employers and international partners in maintaining effective regulation to ensure this is not damaged.

*November 2011*

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### **Written evidence submitted by NASUWT, The Teachers' Union**

#### **EXECUTIVE SUMMARY**

- The NASUWT is clear that there is no evidence that standards in the qualifications used most regularly in the 14–19 sectors have fallen over time.
- The Coalition Government is currently looking to implement numerous reforms of the English education system, causing a great deal of turbulence and uncertainty for schools, teachers and pupils. The reforms proposed by the Coalition Government to the accredited qualification system will add to this turbulence.
- It is inappropriate to propose reforms to accredited qualifications for which there is no demonstrable need.
- The NASUWT maintains its support, in principle, for the existence of an independent regulator for qualifications and examinations that is perceived as being free from political interference.
- The market alone cannot be relied upon to ensure that the standards of comparable qualifications are consistent, that learners are treated fairly and that fees paid to awarding organisations represent genuine value for money.
- The complexity of the current market presents significant challenges in the establishment of an effective accredited qualifications system that meets the legitimate needs of all those with a stake in the coherent and purposeful functioning of the system.
- Accredited qualifications are most properly regarded as a public good, provision of which represents a core responsibility of the state.
- The NASUWT maintains that there is a clear case for the awarding and accreditation of qualifications, particularly key qualifications available in the 14–19 sectors, to be undertaken by a single, dedicated and appropriately accountable organisation located within the public sector.
- The NASUWT has concerns about the degree of democratic accountability that Ofqual is likely to be subject to and that the intention of the Coalition Government to make the Chair of Ofqual a direct appointment of the Secretary of State for Education has potentially profound consequences with regard to the ways in which Ofqual will be able to operate effectively and objectively in future.

- Ofqual’s development of its regulatory strategy should be taken forward in conjunction with teachers and teacher trade union representatives centrally involved in the process of qualification development and approval.
- There is a high degree of accuracy currently in the setting of papers, marking of scripts and awarding of grades; claims that this is not the case are largely unsubstantiated.
- Ofqual should take an active role in monitoring awarding bodies’ work at all stages and levels: the NASUWT believes that the establishment of an effective and meaningful regulatory relationship requires bodies subject to regulation to act in ways that are consistent with the public interest.
- The high cost to schools of entering pupils for examinations, especially at a time of financial constraints means value for money in the design and delivery of accredited qualifications is important.
- It is wrong for awarding bodies to make profits as a result of the provision of qualifications. This represents exploitation of the education system to allow private companies to benefit from public money.
- The advice and support provided by the awarding bodies should be available to all schools, not favouring only those that can afford to purchase this advice. This brings into question the equality of opportunity that should be offered and protected through the education system.
- Competition between awarding bodies has led to a driving down of the quality of support and good practice.

#### BACKGROUND AND CONTEXT

1. The NASUWT welcomes the opportunity to submit evidence to the House of Commons Education Select Committee Inquiry into how examinations for 15–19 year olds in England should be run.

2. The NASUWT draws the attention of the Committee to the ongoing and significant levels of debate about alleged declines in educational standards, particularly in relation to the qualifications used most regularly in the 14–19 sectors.

3. The NASUWT is clear that there is no evidence that standards in these suites of qualifications have fallen over time. The Union notes statements made by representatives of Ofqual to this effect and that arrangements are in place to ensure that effective steps can be taken to address any concerns in this respect that relate to the design of qualifications before they become problematic.<sup>34</sup>

4. Given that one of the motivating factors behind Ofqual’s establishment was to reinforce public confidence in the accredited qualifications system, it is essential that Ofqual takes a more proactive stance than has been apparent to date in communicating its positive findings about the consistency of standards in the system and makes clear the steps that it is taking in consultation with stakeholders to ensure that these are maintained in future.

#### THE IMPACT OF BROADER COALITION GOVERNMENT POLICY ON THE EXAMINATION SYSTEM IN ENGLAND

5. The Coalition Government is currently looking to implement numerous reforms of the English education system, from the break-up of the maintained sector of schools and the admissions code to initial teacher training (ITT) and the National Curriculum, as well as particular subject areas such as personal, social, health and economic education (PSHE) and work-related learning (WRL). These changes are proposed to be put in place swiftly with reduced time for consultation, in some cases, and with little proof that there is a need for change. These reforms are causing a great deal of turbulence and uncertainty for schools, teachers and pupils.

6. In March 2011, the UK was identified by the Organisation for Economic Co-operation and Development (OECD) as a particularly high-performing country and was invited to attend the International Summit on the Teaching Profession held in New York. The invitation recognised the work done by the previous administration in collaboration with all stakeholders to improve the education system.

7. Many of the reforms taken forward by the previous administration, including those related to the qualifications system, have not yet had time to “bed in”. This highlights the inappropriateness of the Coalition Government’s determination to implement further changes to the curriculum and qualifications system. A clear example of this is the current review of the National Curriculum being taken forward despite the fact that the current secondary National Curriculum has only been in place since 2008.

8. The approach of the Coalition Government described above, therefore, represents a clear reversal of the positive approach to policy development in relation to the curriculum and qualification reform evident previously.

<sup>34</sup> Ofqual (2009) Letter from Chair of Ofqual Kathleen Tattersall to Minister of State for Schools and Learners, Jim Knight MP, on standards and monitoring reports on GCSE and A level subjects, 26 March (<http://www.ofqual.gov.uk/files/2009-03-26-kt-letter-to-jim-knight-MP.pdf>) retrieved on 5/1/11.

## THE STATUS AND ACTIVITIES OF AWARDING BODIES

9. In relation to the provision of accredited qualifications, the NASUWT shares the view Ofqual expressed in its consultation document *From Transition to Transformation* that the market alone cannot be relied upon to ensure that the standards of comparable qualifications are consistent, that learners are treated fairly and that fees paid to awarding organisations represent genuine value for money.

10. In the NASUWT's view, it is the marketised nature of the provision of accredited qualifications in the education systems where Ofqual's remit applies that represents the most profound risks to securing these important policy objectives. Not least, the size and complexity of this market, the precise extent of which Ofqual admits is difficult to determine with any accuracy, presents significant challenges in the establishment of an effective accredited qualifications system that meets the legitimate needs of all those with a stake in the coherent and purposeful functioning of the system.<sup>35</sup>

11. Given the wider societal benefits of a fit-for-purpose accredited qualifications system, including those related to employment, access to higher education and the formation of judgements about the effectiveness of education and training systems, the NASUWT is clear that accredited qualifications are most properly regarded as a public good, provision of which represents a core responsibility of the state.

12. However, the current accredited qualifications framework, with its range of non-public sector awarding organisations, many of which are engaged in the delivery of accredited qualifications in order to extract public funds from the education system to secure commercial profits, leads to profound and destructive market failures. These include: the ineffective use of the public resources voted by Parliament to ensure the effective accreditation of learning within the state education system; the duplication of provision between awarding bodies, particularly where awarding organisations compete to provide the same or similar qualifications; and the non-availability of qualifications that would be of value to learners as a result of the unwillingness of awarding bodies to make such qualifications available.

13. As a result of this approach to the design and delivery of accredited qualifications, there is a clear lack of public accountability in the ways in which awarding organisations make use of public money to fulfil a key role within the education system. In light of the fact that the content and structure of the qualifications system has a significant influence on the curricular experiences of pupils in schools and colleges, the independent and publicly unaccountable status of awarding organisations cannot be considered appropriate.

14. Recent developments within the qualifications system have served to compound these problems. The NASUWT notes that the post-19 qualifications system is developing significant deregulatory trends, with education providers and employers being given the right to apply to be awarding organisations. These trends raise issues around the management of quality assurance and rigour in the application of standards applied to providers entering a complex market.

15. In this context, the NASUWT maintains that there is a clear case for the awarding and accreditation of qualifications, particularly key qualifications available in the 14–19 sector, to be undertaken by a single, dedicated and appropriately accountable organisation located within the public sector, as can be found in other successful education systems around the world where 15–19 qualifications exist, such as New Zealand, Eire, and Scotland.

16. The viability of this approach to the development and provision of qualifications is confirmed by the operation of the Scottish Qualifications Authority (SQA), which takes responsibility for all accreditation and awarding organisation activities in Scotland in a way that is transparent and maintains high degrees of political and public confidence in the qualification system. The Committee should, therefore, investigate the SQA model further in developing its recommendations in this area.

17. One national awarding body would:

- have built-in standardisation across each qualification and maintain confidence in standards;
- be easier to regulate and would be more accountable to Ofqual, Parliament and the public, and if an appeal or complaint is made, only one awarding body would need to be monitored for compliance;
- reduce bureaucracy in relation to the administration of examinations by centres and reduce workload burdens, ensuring that teachers and school leaders are not distracted from their core responsibilities for teaching and leading teaching and learning by the need to devote time and effort making choices between awarding bodies offering largely similar qualifications;
- ensure better value for public funds through reduced costs to schools, economy of scale and no unnecessary duplication;
- ensure equality of opportunity and help with parity of provision as well as facilitating the identification of gaps in provision and instituting more appropriate qualifications;
- simplify consultation and collaboration with interested bodies, removing duplication of meetings and the variability of practice; and
- Have a concentration of expertise in the design, delivery and administration of qualifications.

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<sup>35</sup> Ofqual, "From Transition to Transformation: Strategic Regulation of Awarding Organisations and Qualifications".

It is, therefore, clear that a single awarding body would consolidate and enhance public trust and confidence in the qualification system.

18. The Committee's Call for Evidence also raises the viability of franchises to offer particular subjects. The NASUWT is clear that the introduction of franchises would undermine further the ability of the qualifications system to generate economies of scale as there would not be the flexibility to offset the costs of more expensive subjects with more popular ones as is possible with larger awarding bodies. Greater use of franchising could also lead to fewer new qualifications being developed, a possible reduction in the scope of examinations and would require schools to pay a registration fee to each subject awarding body.

19. In such circumstances, it is likely to be the case that consultation with stakeholders would be hampered by the significant range of franchisees that would operate within this market, creating a barrier to the involvement of teachers, employers, further and higher education in the development and monitoring of high quality provision of qualifications. Franchising could also lead to significant additional bureaucratic burdens on centres and increases in staff workload levels as a result of the need to conform to the distinctive administrative requirements of an increased quantity of qualifications providers.

20. It is also possible to identify further concerns about the renewal of franchises within such a system. In cases where possession of franchises is time limited, there may not necessarily be any alternative organisation with the expertise and experience necessary to compete against the incumbent awarding bodies or to replace any failing franchisees. In such circumstances, it is therefore difficult to establish how the viability and credibility of a franchise-based system could be maintained.

21. A system constructed on this basis would also need to be an overarching body to award the franchises. This could be added to Ofqual's remit as they would have responsibility for maintaining high standards of quality but then there would be a need for a body to regulate the awarding process. It is clear that a franchise system would therefore add significantly to bureaucracy within the system.

#### THE ROLE OF OFQUAL

22. Notwithstanding the case made elsewhere in this submission for the creation of a single awarding body within the public sector, it is clear that the Coalition Government remains committed to a marketised approach to the provision of accredited qualifications. In this context, it is therefore essential that the most effective arrangements possible for the regulation of the system are established and maintained. On this basis, the NASUWT accepts the need for an effective regulatory body to be in place, with the full range of statutory powers and sufficient resources to allow it to ensure as far as possible that learners, teachers and others with a legitimate stake in the effective operation of the accredited qualifications system are not subjected to the negative consequences of failure within the qualifications market.

23. This draws attention to the extent of Ofqual's statutory remit and the principles, priorities and practices that determine Ofqual's activities within the context of this remit. The NASUWT recognises that Ofqual's current remit is set out in statute in the Apprenticeships, Skills, Children and Learning Act 2009 and that Ofqual must work within the framework established by the Act.

24. It should be recognised that in discharging its responsibilities under the Act, Ofqual has the ability to have a significant impact on the experiences of learners and the professional and employment circumstances of those responsible for the provision of education and on wider society in terms of the status of accredited qualifications as a public good. In this regard, the NASUWT has concerns about the degree of democratic accountability that Ofqual, which is answerable only to Parliament, is likely to be subject to. In the Union's view, the limiting of Ofqual's accountability to the submission of its annual report to Parliament and periodic reporting to the House of Commons Education Select Committee risks reduced opportunities for appropriate organisations to influence and make representations about the regulation of qualifications and examinations than was the case when Ofqual's functions were undertaken by an executive agency, most recently the Qualifications and Curriculum Authority (QCA).

25. Notwithstanding these considerations, the Union is concerned that the intention of the Coalition Government to make the Chair of Ofqual a direct appointment of the Secretary of State has potentially profound potential consequences with regard to the ways in which Ofqual will be able to operate effectively and objectively in future.

26. In particular, there is a danger that the creation of an independent body to oversee the process of regulating qualifications at strategic, qualification and subject-sector levels could have the effect of further removing the voice of teachers and practitioners from the design, creation and implementation of qualifications and assessment for adults, young people and children. In respect of teachers, it is clear that the specifications and assessment arrangements associated with general qualifications can, if devised inappropriately, impact upon the degree of professional discretion that teachers are able to exercise in relation to meeting the learning needs of pupils and can also have significant workload-related and bureaucratic implications. For this reason, Ofqual's development of its regulatory strategy should be taken forward in conjunction with teachers and teacher trade union representatives centrally involved in the process of qualification development and approval given their status as trained professionals with current frontline experience.

27. This highlights the importance of the establishment by Ofqual of more effective arrangements for the engagement of teachers and their unions in the development and design of criteria in addition to that sought from representatives of the higher education sector, subject associations, employers and bodies such as Sector Skills Councils. While the NASUWT does not deny that each of these groups has a legitimate stake in the work of Ofqual to secure standards, none are able to contribute the perspectives and experiences of frontline practitioners tasked with making use of qualifications specifications in practical learning contexts.

#### ENSURING ACCURACY

28. The NASUWT is clear that there is a high degree of accuracy currently in the setting of papers, marking of scripts and awarding of grades. The publicity around appeals to awarding bodies has increased creating an incorrect perception that there is a concerning level of inaccuracy. In fact, the results of the appeal system demonstrate that there is a high level of accuracy.<sup>36</sup>

29. It should also be recognised that in order to sustain and improve accuracy still further, increasingly effective use is being made of technology.

30. It is important that in seeking to establish systems that ensure the highest possible levels accuracy, practicing teachers are given as much opportunity as possible to set, mark and moderate examinations. While it would be important for greater participation by teachers in this process to be established in ways that do not add to their workload and are consistent with the provisions of their statutory and contractual terms and conditions of employment, approaches to securing greater teacher participation merit further investigation. It would also ensure that teachers would have enhanced access to generally highly regarded examination-related training and development opportunities.

31. In ensuring that the highest standards of accuracy are secured and maintained, it is clear that Ofqual should take an active role in monitoring awarding bodies' work at all stages and levels. The NASUWT believes that the establishment of an effective and meaningful regulatory relationship requires bodies subject to regulation to act in ways that are consistent with the public interest. It is therefore appropriate that Ofqual should expect regulated organisations to make sure that they behave in accordance with the conditions of recognition to which they are subject and that they have the expertise and resources in order to do so. It is also right that regulated organisations should be held accountable to the regulator for the quality and standards of the qualifications they award and the efficiency with which they operate. Awarding organisations should respect Ofqual's role as a regulator, co-operate with it and take remedial action if problems arise. They should ensure that Ofqual is informed promptly of any difficulties or issues in respect of adherence to the terms of recognition applicable to them.

#### THE COMMERCIAL ACTIVITIES OF AWARDING BODIES

32. The high cost to schools of examinations, especially at a time of financial constraints, emphasises the importance of value for money. With a market system of competing awarding bodies, centres either have to pay to register with each board or risk restricting choice and disadvantaging some pupils. The choice also involves additional financial and time costs related to researching the relative merits of different awarding organisations.

33. Some awarding bodies profit from publishing textbooks for particular subjects. These can be expensive to buy as a class set, especially when specifications have changed numerous times over the past decade. It is wrong for awarding bodies to profiteer on the back of the qualifications they provide. This is exploitation of the education system to allow private companies to benefit from public money. The advice and support provided by the awarding bodies should also be available to all centres, not just those that can afford to purchase such services or are willing to do so. This would ensure that all relevant staff and learners benefit equitably from the highest possible standards of provision.

34. Competition between awarding bodies over price has led to a driving down of the quality of support and good practice. There has been a reduction in CPD courses on the delivery of the courses, for example, there are no longer visiting moderators for drama GCSE coursework where it is more effective to see the pupils working practically rather than relying on written work and video evidence, which cannot truly reflect the live performance.

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<sup>36</sup> Ofqual, Statistical Bulletin: Enquiries about results for GCSE and GCE: Summer 2010 Examination Series, 2010; Ofqual, Appeals Against Results for GCSE and GCE: Summer 2010 Examination Series, 2011; Examinations Appeal Board Annual Report 2010

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## Written evidence submitted by The Royal Grammar School, Guildford

### MULTIPLE AWARDING BODIES

1. *Advantage—Choice.* A key advantage of multiple boards is that schools can choose the syllabus which is best for its pupils. At GCSE and IGCSE, the existence of a range of bodies has tended towards diversity of provision in terms of coursework or controlled assessment components, and the relative weighting of these components where they are present. The concern is that concerns of cost and simplicity/uniformity would prevail over the current plurality, and over time a one-size-which-doesn't-really-fit-all model will be imposed from above.

2. *Advantage—Innovation.* It is possible to argue that the existence of several awarding bodies is needed to encourage innovation. In science the Nuffield “revolution” may not have got off the ground if there had been a single body, and science teaching would therefore have been impoverished. The development of the Pre-U is a further example of the importance of a landscape responsive to innovation.

3. *Disadvantage—Market- or actuarial- driven examining and outcomes.* Here we refer you to HMC's investigation of this question in relation to the award of A\* in Autumn 2010. The significantly number of A\*s awarded by differing exam boards can be interpreted in many ways, some favourable to pupils, some not; the point is that there is uncertainty about the transparency of the award of this crucial grade. Having said this, I am not confident that the existence of a single exam board would by its simple existence solve this problem.

4. *Disadvantage—lack of accountability of exam boards.* Yes, exam boards are regulated by Ofqual, and yes, it could be argued that the existence of a market/competition acts as a regulator, but the experience of schools is that exam boards hold themselves to account and the only grounds for appeal are against the guidelines that the board issues for itself. Every year there is a serious problem with at least one subject's examining. Sometimes the exam board rectifies it, sometimes not. Should you wish me to give greater details of this, I would be happy to do so; I have a file of such cases.

Again, would the existence of a single awarding body solve this problem?

5. *Disadvantage—variable quality of examining.* The need to keep costs down in a marketplace has resulted in poor pay for examiners, and on occasion Undergraduates/those who do not know the syllabus well have been recruited to mark scripts. Quality control is a problem. Moving exam boards takes time, and the impact of inaccurate marking at A2 in particular can be catastrophic.

6. If there were a single awarding body, what would be the fate of the IB?

### THE COMMERCIAL ACTIVITIES OF EXAM BOARDS

7. There is a difficulty with examinations having a single endorsed publisher deals for the recommended coursebook. It works well if the book is good but there have been occasions where this was not the case; it is as brave department which ignore the book in these circumstances. For example, there are several chemistry texts “endorsed” by Edexcel (one written by their own chair of examiners) and one which is their “official one”.

Some teachers feel that text books are written too quickly and even the official ones contain a large number of errors and typos. Too many of the endorsed textbooks are basic and encourage the impression that candidates need only read one book to get through their exams. Or worse, that wide reading is dangerous in that it might lead to the writing of ideas which will be penalised.

For Edexcel Politics, by contrast, the principal examiner has produced a high-quality book. It does not have the exam board logo on the front, but it does not need to: everyone who teaches the paper knows that what he thinks fundamentally shapes the specification. This is a crude commercial way of setting the standard, but it does discourage a pluralistic approach to the subject, and can even make pupils wary of reading around the subject

### THE COST OF EXAMS

8. Scrapping AS at the end of Year 12 might make the system cheaper and less unwieldy.

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## Written evidence submitted by the National Union of Students (NUS)

### BACKGROUND

1. The National Union of Students (NUS) is a voluntary membership organisation which makes a real difference to the lives of students and its member students' unions. We are a confederation of 600 students' unions, amounting to more than 95% of all higher and further education unions in the UK.

2. Through our member students' unions, we represent the interests of more than seven million students. Our mission is to promote, defend and extend the rights of student and to develop and champion strong students' unions, including those in higher education institutions to ensure learners' interests are represented.

### EXECUTIVE SUMMARY

3. NUS welcomes the opportunity to respond to the Education Select Committee's call for evidence for the inquiry, "How Should Examinations for 15–19 Year olds in England be Run?"

4. NUS believes that a single, centralised examinations body would offer a better, more reliable and more efficient examinations system.

5. NUS also continues to argue that Ofqual should be given great powers to use as the examination system's regulator.

### ISSUES WITH HAVING A RANGE OF AWARDS BODIES FOR ACADEMIC AND APPLIED QUALIFICATIONS

6. NUS believes that the current system, based on competition between a number of examination bodies is a contributory factor in the high level of errors in exam papers over the summer. As such, NUS believes that a single, centralised non-profit examinations body would be best placed to provide a quality, reliable and consistent examinations system.

7. Fundamentally, examinations should be entirely funded through the state. The payment of examinations bodies to provide this service introduces a number of perverse incentives for education providers to get "value for money" from their examinations rather than choose the exam board that is best suited for their cohort of students. It also introduces an unavoidable disparity between examination boards who provide exams for equivalent qualifications.

8. The disparity that can arise in the behaviour of different examinations boards can to be seen in instances during and following the errors that arose in papers last summer 2011. For example, an NUS survey of 119 student effected by the examinations errors has highlighted that in some instances it would appear that the centres themselves were not effectively communicated with by the exam boards, where in others this communication was strong and effective.

9. As such, NUS would recommend as a very basic first step that that exam boards review their methods for communicating with centres, and that centres are adequately briefed about the nature of errors, the likely impact upon students, and provided with any further relevant details to pass on to students.

10. More fundamentally, such disparate approaches across the examinations system would suggest that there is a need for greater integration—such as through a move towards one central examinations body.

### HOW WE CAN BETTER ENSURE ACCURACY IN SETTING PAPERS, MARKING SCRIPTS AND AWARDING GRADES

11. NUS believes that under a centralised, not for profit exam awarding system, accuracy and consistency are much more likely to be assured for candidates.

12. Huge amounts of time and resources are spent by exam awarding bodies in standardising their writing, marking and awarding systems and this inefficiency could easily be avoided by having one nationalised system.

13. NUS continue to call for greater powers to be given to Ofqual. Whilst they do good work currently in sharing and promoting best practice, it must be clear that their role is as a regulator, not as the representative body of examination boards. Thought must be put into ensuring that these roles are never conflated. As such, NUS believe that Ofqual should be given greater punitive powers which they should be encouraged to use far more forcefully in instances where examination bodies fail to live up to the high standards expected of them.

14. Whilst a point that is only related to the examinations process more generally, it is worth noting that NUS support the introduction of a system of post qualification applications (PQA) which avoids the current situation where over 40% of applicants are over estimated in their performance, and consequently are forced through a traumatic, chaotic and inefficient clearing system. The current situation based largely on predicted grades causes enormous complications to the examinations system, and is often difficult for the individual to effectively negotiate.

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THE COMMERCIAL ACTIVITIES OF AWARDING BODIES, AND THE IMPACT THAT THIS HAS ON SCHOOLS AND PUPILS

15. NUS argues that the idea of introducing a market into the examination system introduces perverse incentives for the end users and does nothing to address inequalities between those from advantaged and disadvantaged backgrounds. We fundamentally believe that it should never be the case that your ability to achieve in an examination is a direct result of your ability to pay and that any resources that are required to be able to pass examinations should be free, as well as the cost to the individual of the examination itself.

16. Indeed, it seems that the practice of examination bodies producing study and revision resources for sale constitutes a potential conflict of interest. In particular, it seems that this creates a number of internal markets (the market for resources aimed at a particular examination from a particular examination body) in which fair competition is extremely hard to achieve.

*November 2011*

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**Written evidence submitted by Helen James**

I have heard from my teachers' network that the House of Commons is conducting an investigation into the administration of examinations for 15–19 year olds, and is interested in hearing the views of professionals in the field. I would like to submit my views to this inquiry.

I work as a private tutor to pupils of secondary age as well as adults, in the subject of modern foreign languages, specifically French and German. These pupils are taking GCSEs or GCEs through mainstream or independent secondary schools, or via adult education, and are seeking to improve their skills and their chances of succeeding at examination by hiring a private tutor.

Since the introduction of controlled assessment as a tool for examining writing in MFL, my position as a private tutor has become considerably more difficult, and I am less able to teach well and improve the skills of my pupils. The reason for this is as follows.

1. Revised arrangements for Controlled Assessment (MFL): Summary

- (a) The Controlled Assessment of writing is arranged into Stage 1, Stage 2 and Stage 3. Stage 1 is general preparation around the topic in question and can last an unspecified amount of time. The teacher can conduct whatever activities are necessary to teach the vocabulary and grammar structures required.
- (b) Stage 2 is the period of pupil preparation, which lasts up to six classroom hours. At the start of this stage the teacher gives the pupils the writing stimulus, and after this point may not actively teach the pupils, merely restricting input to "clarifying the requirements of the task". The pupil must prepare using their own resources, text books, dictionary, exercise books, or collaboration with other pupils. At no point during this period may the teacher correct or improve the understanding of the pupil. Stage 3 then follows on directly, where the pupil writes the assessment under controlled conditions with access only to their own notes made without teacher assistance.

2. The problem is that my pupils wish to improve during their preparation stage, however are prohibited from asking questions, or having such questions answered, by teachers at their school.

3. However, such pupils are perfectly well able to turn to an external tutor, who has no contract with the school, and is not bound by any prohibition on teaching imposed by the requirements of the GCSE arrangements at that school. In this way, the pupil who is financially better off and able to hire such external help is at an advantage over other pupils. While this may be generally true in many ways, this is grossly unfair when it touches directly on the conduct of assessments.

4. The quandary can be summed up thusly; although the school/examining centre may wish to impose restrictions on the relative independence of the pupils' learning activities during the Stage 2 period, once the pupil leaves the school premises, the school ceases to have any effective control or supervision of that pupil or their learning activities. To construct a controlled assessment arrangement, in which such control/supervision is implied, is spurious, misguided, and prone to dishonesty and unfairness.

5. In summary, during Stage 2, which can be as long as two weeks:

- Candidates can create, rehearse and internalise errors, as they have no teacher feedback on their work; which disadvantages their learning
- With some exam boards, regulations state that learning materials may not be taken home during Stage 2, and therefore keen candidates are not able to put more time into learning, therefore restricting them rather than advancing them in their academic progress
- Conversely, with other boards, learning materials are allowed to leave the classroom, creating an uneven playing field where candidates from different schools have different learning and examining conditions

- Candidates can choose to do extra work at home during Stage 2 by hiring private tutors, or working with native speakers within their extended family or friendship circle, to clarify any misunderstandings or correct errors. Therefore candidates who are financially better off and able to hire private tutors are advantaged in the assessment process.

6. Some teachers have dealt with these problems by effectively removing Stage 2 from their arrangements. Others continue to use this period as described in the guidelines. Again this results in an uneven inconsistent practice across the country.

7. The removal of a terminal examination for writing in MFL has made it extremely difficult logistically to accommodate native or near-native speakers who wish to gain a qualification in their mother or second language without attending class. Moreover, adult education centres also struggle to fit in controlled assessments within their intensive year-long evening courses; where before the terminal examination would have been a straightforward, time-efficient examining choice. While there is an iGCSE available in French with a terminal written exam, it is (a) of a different (more demanding) academic standard and (b) not matched by an equivalent accredited examination in German.

8. In these views I am supported by a large number of teachers at schools across the country, as evidenced by discussions on our national teachers' forum. While opinion is divided on whether a return to terminal writing examination would constitute an improvement, almost all agree that the reinstatement of choice between either CA or terminal exam would be helpful.

*November 2011*

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### **Written evidence submitted by the Advisory Committee on Mathematics Education (ACME)**

#### **ABOUT ACME**

The Advisory Committee on Mathematics Education (ACME [www.acme-uk.org](http://www.acme-uk.org)) is an independent committee, based at the Royal Society and operating under its auspices, that aims to influence Government strategy and policies with a view to improving the outcomes of mathematics teaching and learning in England and so secure a mathematically enabled population. The ACME response has been informed by input from the mathematics community through the ACME Outer Circle, a group assembled to encompass a breadth of knowledge, support and influence which we consult on key issues.

#### **SUMMARY**

1. Key features of any curriculum and examination system include effective regulation, strong subject leadership, capacity for collaboration and innovation, and transparency of operation. The dominant consideration for qualification and assessment development should be the nature of a subject and its educational purpose and goals.

2. ACME has concerns about the powers and responsibilities of a regulatory body and suggests that the question of regulation or scrutiny should therefore form part of this Select Committee inquiry.

3. Consistent accuracy in setting and marking examination questions is only one facet of the overall quality of an examination paper. The current system does not always adequately lead to the production of high quality examination papers.

4. ACME is concerned about the commercial relationships that exist between awarding organisations and publishers. Awarding organisations should be prevented from using their names or logos on textbooks, and publishers should not divulge the fact that an author is also an examiner for a particular awarding organisation.

#### **INTRODUCTION**

5. There has never been “a golden age of assessment”. Each change to the examination system has aimed to address issues that have arisen in a previous system. The current examination system and its regulation require review and further changes in order to ensure that all qualifications are respected and valued.

6. There is a wide range of mathematics qualifications taken by pupils in the 15–19 age bracket, including GCSEs, AS and A-levels, Functional Skills, Free Standing Mathematics Qualifications (FSMQs), iGCSEs and many more. A large number of mathematics qualifications are taken each year. For example, in England, each year approximately 700,000 students sit GCSE mathematics and 75,000 sit A-level mathematics.<sup>37</sup> Whilst ACME welcomes the existence of a range of qualifications that suit individuals' needs, this landscape needs to be clear to students, parents/carers, teachers and employers.

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<sup>37</sup> JCQ England only provisional data 2011: [http://www.jcq.org.uk/national\\_results/alevels/](http://www.jcq.org.uk/national_results/alevels/)  
<http://www.jcq.org.uk/attachments/published/1589/GCSE%20RESULTS.pdf>

7. GCSE mathematics is currently a gate-keeper qualification at the end of compulsory schooling. Employers and universities use a grade C in GCSE mathematics to help them to decide whether individuals will be able to succeed in their chosen career or university course. Thus it would seem essential that the examination system maintains GCSE mathematics at an appropriate standard and has the confidence of employers and higher education. However, many from across schools, colleges, universities and employers feel that the present system has shortcomings.<sup>38, 39</sup>

8. In order to resource the examination system, each year schools across the country pay the awarding organisations' examination entrance fees,<sup>40</sup> at total of £281 million in 2008–09. This figure represents a significant increase on the previous six years, partly because of the pressures on students and schools and colleges to increase their grades (for example at the C/D boundary at GCSE) through re-sitting examinations and/or modules. It is important that this budget is spent effectively.

9. The figure above for the costs of examination entrance fees does not include any fees for support materials provided by the awarding organisations. Awarding organisations also provide or endorse a range of resources for schools. These resources include lesson plans, student worksheets, textbooks and training opportunities. Some are provided without charge.

10. It is not possible to provide evidence on the range of awarding organisations and the quality of the process and their commercial activities without also considering the broader system of relationships in which national examinations at 15–19 operate. The awarding organisations do not exist in isolation; they are regulated, are required to respond to changes in the National Curriculum (at least in the case of GCSEs in National Curriculum subjects), and government accountability measures impact significantly on qualifications and their take-up in schools.

11. The effectiveness of these relationships is crucial, no matter how many awarding organisations there are. At the moment, this system is out of balance. At times, the assessment system, and the regulations which govern it, undermine the broader aims of the National Curriculum and the A-level subject criteria. The development of a national assessment or examination system should take place alongside curriculum review, and should reflect the full aims of the curriculum.

#### THE ROLE OF REGULATION

12. Whatever examination system is in place, effective regulation or scrutiny must be designed to support high quality provision of qualifications and not, as at present, hinder it. Such scrutiny could be undertaken by a quango, a national board, or ultimately parliament itself. Currently, regulation is undertaken by Ofqual, with awarding organisations being responsible for internal quality assurance.

13. ACME has concerns about the current approach to regulation and suggests that the question of regulation or scrutiny should therefore form part of this Select Committee inquiry. In particular we are concerned that:

- (a) There is no subject expertise within Ofqual. For nationally important key subjects, such as mathematics, we are concerned that Ofqual is not able to draw on dedicated subject experts within its own organisation. This lack of expertise results in assessments which are not always consistent with a subject's learning demands, have widely differing interpretation of the criteria and do not mirror the full range of the stated learning aims, resulting in a progressively "lowest common denominator" interpretation. *Any external regulator should maintain its own expertise in mathematics and its assessment and there should be mechanisms to validate subject content in cases of appeal. The regulation process should consider whether assessments are well designed, cover the curriculum and its learning objectives appropriately, and enable pupils to demonstrate what they know and are able to do.*
- (b) Because of this lack of internal expertise, the regulator appoints external subject experts. However, there is no transparency in Ofqual's operation in terms of the choice of external subject experts consulted. This results in a lack of confidence in Ofqual's ability to regulate key national examinations effectively. *Any regulator of qualifications should appoint its advisors in a transparent way and bodies such as ACME and the subject associations should be able to challenge any advice in mathematics that they feel is unsatisfactory.*
- (c) There has been a tendency for a "one size fits all" approach to the regulation of subjects. By treating subjects generically, little room is left for the vital aspects that distinguish one subject from another.<sup>41</sup> Ofqual's overall approach to regulation and its enforcement stifles innovation in the system. *The regulator should ensure that assessment structures for mathematics harmonise with subject content and the curriculum aims.*

<sup>38</sup> Evaluating mathematics pathways, Research Report DFE-RR143, DfE, 2010.

<sup>39</sup> Mathematical Needs, Mathematics in the workplace and in Higher Education, ACME, June 2011.

<sup>40</sup> DCSF figure for "Examination fee expenditure" in English schools in 2008/9, taken from 2010 Annual qualifications market report, Ofqual.

<sup>41</sup> For example: the decision to end mature GCSE in mathematics, the relationship between coursework and assessment in the FSMQs, assessment objectives inappropriate in the Linked Pair of mathematics GCSEs.

- (d) Even when Ofqual does find failures have occurred within awarding organisations, its powers appear limited. The regulator can place an awarding organisation under greater scrutiny in the future; but it is unlikely to prohibit an awarding organisation from offering key national qualifications. *Regulation should place a significant emphasis on preventing problems with examinations and/or awarding organisations emerging in the first place. The regulator needs to have the power to impose appropriate sanctions on awarding organisations when security is breached, or when questions are shown to be inaccurate or even incorrect.*

## MODELS FOR A NATIONAL EXAMINATION SYSTEM

### *The status of awarding organisations*

14. Before discussing various models for the examination system, we note that the five awarding organisations in the UK that award GCSEs and A-levels are set up in different ways and therefore have different characteristics. The awarding organisations themselves have complex histories, but today they describe themselves as follows:

- AQA—a registered educational charity.<sup>42</sup>
- CCEA—a non-departmental public body reporting to the Department of Education in Northern Ireland.<sup>43</sup>
- Edexcel—a subsidiary company of Pearson,<sup>44</sup> which is a commercial organisation.
- OCR—Oxford Cambridge and RSA Examinations is a company limited by guarantee registered in England, and<sup>45</sup> part of the Cambridge Assessment Group, a not for profit organisation, which itself is a department of the University of Cambridge.
- WJEC—a registered charity, and a company limited by guarantee, owned by the 22 local authorities in Wales.<sup>46</sup>

15. The differing nature of the awarding organisations is perceived to affect how they respond to the various incentives that the system promotes, and it is worthwhile bringing this element into the Committee's inquiry. In particular, it should be noted that "commercial interests" of awarding organisations can prevent them from working together—particularly in pioneering the development of high quality new qualifications.

### *The current model*

16. The current model for GCSEs and A-level examinations is a regulated market. This model has some strengths, including:

- (a) Competitiveness in the administration of examinations should, along with effective regulation, keep costs low for schools (although it is not obvious whether this effect is being realised).
- (b) The quality of the administrative service to schools should be enhanced by competition between examination providers.
- (c) Multiple awarding organisations should maintain flexibility in the scale of the system and should enable it to cope with large numbers of entrants to individual qualifications.
- (d) Having an external regulator and multiple awarding organisations maintains a separation, to some degree, between short-term political priorities and the need for longer term qualification development.

17. However, the current model has raised some serious concerns:

- (a) Competition between awarding organisations may have led to a downward auction in standards. This is particularly so in the case of large entry specifications, such as mathematics, which inevitably subsidise smaller specifications.
- (b) Confidence in the system may be undermined by the variety of specifications attracting the same qualification title.
- (c) Expertise in setting effective assessments is limited in some areas: this is particularly obvious where sophisticated contextualised questions are required several times a year, as with the Functional Skills qualifications.
- (d) The awarding organisations are perceived to be under pressure from schools and colleges to minimise change to syllabuses and assessment methods. Meaningful development in assessment fully supports intended changes in learning experiences for students.

18. The curriculum and assessment models adopted by each awarding organisation are in some cases currently very similar so, where this is the case, nothing is being gained by the existence of several awarding organisations. Moreover, even if there were substantial differences, it is in most cases the institutions rather

<sup>42</sup> <http://www.aqa.org.uk/about-us.php>

<sup>43</sup> <http://www.rewardinglearning.org.uk/about/index.asp>

<sup>44</sup> <http://www.edexcel.com/Aboutus/who-we-are/Pages/Whoware.aspx>

<sup>45</sup> <http://www.ocr.org.uk/aboutus/>

<sup>46</sup> <http://www.wjec.co.uk/index.php?nav=1>

than the students which choose the awarding organisation providing each qualification. In these cases, students do not benefit from the variety on offer:

- (a) Examination entrants on courses or modules with low participation may be spread between awarding bodies, leading to inefficiencies in the system.
- (b) There is duplication of effort involved in the development of new specifications.

19. The current model could be made more effective, without reducing the number of awarding organisations, particularly through improved collaboration. The awarding organisations operate as an oligarchy at the top level concerned with the protection of intellectual property. However, people who work at subject level are used to working together as teachers or examiners. There is a clear mismatch here.

20. It is possible to work more collaboratively. Four awarding organisations have been involved in the development of the linked pair of mathematics GCSEs (AQA, Edexcel, OCR and WJEC). These organisations, facilitated in the first instance by ACME, have been collaborating to improve the quality of the pilot examinations. However, this collaboration has been post hoc. It would be invaluable if the awarding organisations tried to develop questions collaboratively so as to improve the quality of the setting of examination questions, the consistency of the interpretation of assessment objectives and the actual number of marks awarded for similar types of question. *ACME believes that its experience with the linked pair of mathematics GCSEs demonstrates how a collaborative approach can produce innovation and quality, and this should be extended to formal collaboration in the development of new specifications and qualifications.*

21. The awarding organisations each independently seek advice from a range of subject associations, mathematics education researchers and mathematics organisations, which is not the most efficient way to function. For instance, some awarding organisations are now holding regular meetings or seminar series relating to mathematics assessments. *If the current number of awarding organisations remains the same, we would welcome significantly more collaboration between them in order to improve the efficiency for all concerned. A standing mathematics council could be introduced, which could have a remit wider than qualification development (see paragraph 30b).*

22. *All awarding organisations should be required to commit to innovation as part of normal practice, and they should work with groups of schools, subject associations, charitable bodies and others to do this.* They should be able to show how such projects advantage learners, and that such projects are informed by advice from a range of stakeholders. In other words, the assessment system should be part of ongoing curriculum review.

23. It has been argued that such innovation is stifled by the awarding organisations having to work to restrictive guidelines. *If the system continues to include multiple awarding organisations, the guidelines would need to be reviewed in order to ensure that they support, rather than undermine, innovation.*

## ALTERNATIVE MODELS FOR A NATIONAL EXAMINATION SYSTEM

### *Rationalising the number of awarding organisations*

24. As long as Academic and Vocational qualifications remain separate, it may be inevitable that there will be distinctly different types of awarding organisation. A separate question is whether there should be a smaller number of organisations awarding GCSEs and A-levels. The number of organisations awarding GCSEs/A-levels has already reduced over the years; the question now is what the implications would be of taking this further.

25. This could result in a single, national awarding body such as in Scotland. Alternatively there could be a franchise model, where a single qualification is operated by an awarding organisation for a given length of time.

26. A single awarding body would:

- (a) Improve consistency in terms of examination setting; confidence in qualifications would therefore increase.
- (b) Result in less time spent making the same qualifications comparable across different organisations.
- (c) Be able to innovate, as new specifications could be developed (in suitable time scales) with groups external to the single body. Choices of specification could also still be offered, much as awarding organisations do currently.
- (d) Operate more efficiently through economies of scale.

27. However, counter arguments might be:

- (a) There would be no efficiency incentive for the awarding organisation—processes could be bloated and expensive. There would be a monopoly on examination fees for national examinations.
- (b) If something goes wrong with an examination, or a specification is in some way flawed, it would affect the entire cohort of students, potentially over 700,000 individuals in the case of GCSE mathematics.

- (c) If, for any reason, the qualification is not deemed fit for purpose by schools, parents, employers of HE, there remains a risk that alternative qualifications may be created by other providers, hence undermining the national qualifications, although this is possibly unlikely in the case of high currency qualifications like GCSE Mathematics.
- (d) Examination specifications risk becoming fossilised, unless requirements to develop and innovate are contractual.

#### *National Curriculum assessment model*

28. An alternative model of developing national examinations could be modelled on the End of Key Stage tests. When the End of Key Stage tests were first introduced, QCA (as then was) had responsibility for their development, including pre-testing and quality control, and the administration and marking of the tests. The Development body was also responsible for the appointment and training of markers and the standardisation of results from year to year.

29. The development of the assessment questions was undertaken by academic teams based in a university or the NFER.<sup>47</sup> The test items were then trialled on thousands of schoolchildren and then discussed by a large test review group of teachers, mathematics officers from within QCA, HMI subject association appointees and national mathematics advisers.

30. The present practice of setting and marking GCSE and A-level qualifications, as well as other national qualifications is very different, particularly in terms of the amount of development and trialling of assessment items. However, it should be noted that GCSE and A-level qualifications are high-stakes examinations, and this may impact on the effectiveness of this model, and the style of questions may not suit trialling. Also, there are issues regarding security (or the lack of it) of pre-trialled questions.

#### *University-led model*

31. A university-led model, in which control of GCSEs and A-levels is through one or more higher education institutions, may be attractive to some. A large amount of expertise resides in higher education, employers, learned societies, subject associations and the teaching community. Universities should continue to be included in any reviewing groups set up to approve papers in A-level Mathematics and Further Mathematics.

32. However, the majority of mathematics students will go into employment or study subjects other than mathematics, but will still need an understanding of mathematics.<sup>48</sup> In general, universities may know very little about the mathematical needs and capabilities of these, or younger, students. If examination boards become dominated by university perspectives, this might return us to a situation when there was little that was relevant in the mathematics curriculum for large numbers of students.

#### *Desirable features of a curriculum and examination system*

33. In order for the assessment system to function properly, the following factors should be considered:

- (a) *Effective regulation*—The regulation of the examination system should be transparent and accountable to subject communities, and not hinder high quality provision of qualifications (see paragraph 9 above).
- (b) *Leadership*—There should be subject specific leadership across curriculum and qualifications. Consideration should be given as to whether a standing mathematics council, owned jointly by the subject community and the government, could be established.
- (c) *Coherence*—Curriculum development should operate within legislated parameters of a fixed timetable of curriculum reviews. Assessment should be considered alongside curriculum development.
- (d) *Collaboration*—If multiple awarding organisations exist, they should be required to collaborate on the development of qualifications and assessment instruments.
- (e) *Innovation*—Awarding organisation(s) should be encouraged to innovate, working with groups of schools, subject associations, charitable bodies and others.
- (f) *Subject expertise*—awarding organisation(s) should draw on subject expertise in higher education, schools, subject associations, in a clear, transparent, and meaningful way.
- (g) *Transparency*—The roles and relationships between awarding organisations, regulators, government and subject associations should be clear and transparent.
- (h) *Clarity*—The system of qualifications must be clear to students, parents and carers, teachers, employers and HE.
- (i) *Accountability mechanisms*—Accountability mechanisms should not distort the development or use of qualifications. They should support good teaching and learning in schools and colleges.

<sup>47</sup> National Foundation for Educational Research.

<sup>48</sup> Mathematical Needs, Mathematics in the workplace and in Higher Education, ACME, June 2011.

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## ACCURACY IN SETTING PAPERS AND MARKING SCRIPTS

34. Consistent accuracy in setting and marking examination questions is important, but must be considered in the wider context of their overall quality. ACME is concerned about this: occasional instances of conceptual flaws or the poor posing of questions are accompanied by questions which are inconsequential, predictable or lack imagination. The current system does not always lead to the production of high quality examination papers.

35. A national mathematics body responsible for all curriculum and qualifications development, and for developing high quality examination questions, could improve the quality of examination questions (see paragraph 30b). Such a body should have a permanent team of recognised subject experts and subject assessment experts and should draw on talent throughout the land to stimulate all developments and provide quality-control over these developments. *At the very least, specifications and assessment instruments should be extensively piloted, and then evaluated, before being introduced into schools.*

36. Issues of quality and accuracy have been exacerbated by the number of assessments each awarding organisation has had to develop each year. *The proposed changes to the number of examination series may help to address some of our concerns.*

## COMMERCIAL ACTIVITIES OF AWARDING BODIES

37. ACME is concerned about the commercial relationships that exist between awarding organisations and publishers, which allow textbooks to be sold as having been written or endorsed by the chief examiner. Setting exams should be a position of trust not a commercial opportunity. The use of examination boards' logos to advertise books also places them at an unfair competitive advantage against other, possibly better books.

38. Awarding organisation logo endorsements or chief examiner authorship encourage schools to make purchasing decisions on the basis of author affiliation rather than the quality of the resource itself in terms of the teaching and learning it supports. Endorsed textbooks are often seen as the safe option by schools. This is often not in the best interests of the learners. These texts tend to be too closely aligned with the assessment of the syllabus with a focus on passing the examination, rather than encouraging exploration of related topics and applications, and the development of mathematical thinking.

39. *ACME recommends that awarding organisations are prevented from using their names or logos on textbooks and that publishers do not divulge the fact that an author is also an examiner for a particular awarding organisation.*

40. Endorsed textbooks also have to be reprinted (and sometimes changed) when specifications change. This culture of reprinting can lead to further costs for schools and colleges, and, potentially, could compromise the quality of the textbooks and related resources. Timelines during specification development are tight, leading to very short turnarounds for changes to endorsed specifications. In contrast, high quality textbooks have often been produced by special projects, such as the School Mathematics Project (SMP), Nuffield Mathematics, and Mathematics in Education and Industry (MEI) over longer periods of time. This high quality is due to the books growing out of a vision of a course which is itself the result of a deeply considered curriculum and qualifications development programme for mathematics. *The timescale for revision and implementation of specifications should be lengthened and be related to the review of the National Curriculum on a fixed 10 year cycle.*

41. Chief examiners also run paid-for training sessions which risk being focused on coaching participants on how to pass the examination, further encouraging "teaching to the test" in schools and creating an incentive for the examiner to set questions in such a way as to reward those who attend the course. *Such training offered by awarding organisations should be closely monitored against standards for professional development. This could be achieved, possibly through the NCETM CPD accreditation system.*

## IN CONCLUSION

42. The present system has many critics. There is the potential for improving the ways in which the mathematics curriculum is developed and assessed and how qualifications are developed and regulated. *The ways in which this is done will depend on the form of the overarching structures and mechanisms that are put in place; the success of the system relies on all of these working to the benefit of the students. The factors that need to cohere include regulation, curriculum review, innovation, safeguarding of standards, the setting and marking of examinations, and the development and marketing of suitable resources and textbooks.* At present the way the system operates tends to favour institutions and agencies rather than the students themselves.

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**Further written evidence submitted by Advisory Committee of Mathematics Education (ACME)**

TESTIMONIALS CONCERNING MULTIPLE ENTRIES TO GCSE MATHEMATICS

ACME believes that multiple entry to GCSE—the practice of entering students for GCSE mathematics with several exam boards simultaneously—should be considered alongside the question of early entry, as many of the drivers and implications are the same.

Below are three testimonials from teachers or advisors who have used or encountered this practice in their work.

As a National Challenge school we were under huge pressure to raise exam pass rates in a short period of time. Despite high value-added scores and good Ofsted ratings, we simply had to improve the GCSE figures. We opted to enter students for multiple exams—in June 2010 we got an extra six students to reach grade C in Mathematics by entering them for Edexcel linear, Edexcel modular and OCR. In English this took us from 23% to 55% A\* to C. So we are no longer a National Challenge school, and no longer at risk of closure. But since the drive to improve our results year on year still remains, the push for early and multiple entry hasn't changed, in both Maths and English. We secured at least an extra five grade Cs in June 2011 by putting students into both linear and modular courses.

If we hadn't been able to do this then our school might have been closed. What choice do we have? Banning multiple entry wouldn't tackle the cause of the problem here, which is the focus on arbitrary performance targets that don't take account of value added. Our teaching hasn't changed, and other than repeated and early exam entries our methods haven't changed. While we know taking more than one test gives them improved confidence and allows them to pass, it has also reduced any value added, since once they gain the C we stop pushing them to improve, they are no longer of concern.

I don't like the students doing exams early, and multiple entry means that they have virtually a whole day in an exam. For the majority of students it makes no difference (they fail both or pass both). But, when there are a few students who do pass, it is hard to argue that it isn't beneficial, even forgetting about the school, and league tables. For those five students multiple entry could have a massive impact on their future, since they have now gained a C.

*Teacher*

When I was a LA consultant I was asked about this on several occasions particularly in National Challenge schools as they were given money to improve their results. In all cases this was predicated on the notion that some bodies were "easier" than others. My guidance was always that the content coverage of each body every year would be slightly different and this would explain variations and they would be better advised to spend the money on staff training which would be more likely to deliver the improved outcomes. However, some schools did pursue it and gained a few extra Cs but at significant cost.

*Ex-LA Consultant*

Informally, I certainly have examples of schools that are entering students this summer for modular entry with one exam board and linear entry with another board. Sometimes this enables one of the entries to be at Foundation level and the other at Higher. Schools are no longer called National Challenge but this now happens in schools that have had two consecutive satisfactory inspections—it is simply regarded as another tactic to improve results.

*Advisor*

*May 2012*

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**Written evidence submitted by Neil McNaughton**

POSITIONS AND EXPERIENCE

- Currently Principal Examiner, AS Level Government and Politics for Edexcel.
- Experienced examiner for 20 years with AQA (formerly AEB) and Edexcel (formerly ULEAC).
- Former Head of Politics Department, University College School.
- Former editor, *Talking Politics*, the journal of the Politics Association.
- Current writer of many textbooks as well as teacher and student guides in Politics.
- Currently Vice Chair of Governors, Westminster Academy.

I am unable to attend the December seminar, but wish to offer this written submission:

Note: My comments relate to A Level examinations only. They relate to my experience with two examination boards.

INTEGRITY

In my experience, every individual, from assistant examiners up to exam board executives, has demonstrated the highest level of integrity, all being dedicated to ensuring the accuracy of assessment and to serving the best

interests of examination candidates. At the same time, every practice adopted by exam boards is aimed at producing fair assessment.

#### COMMERCIALISM AND QUALITY

Although exam boards have the aim of operating in the best interests of their exam candidates, they also have to take into account commercial considerations. In the case of Pearson/Edexcel this is a profit motive, in the case of not-for-profit boards, there may not, strictly, be a profit motive, but, as they effectively in competition with other boards, they may have to adopt competitive practices and thus be in a quasi-commercial position.

While, as I have stated above, Exam boards display a high level of integrity, there are occasions and situations where it is inevitable that the quality of assessment may be jeopardised by commercial considerations. I have three concrete examples:

1. The “standardisation” of examiners used always to take place in intensive, face-to-face meetings. With Edexcel (and, I think other boards) these are being replaced by online meetings or other forms of “remote” standardisation. Naturally face-to-face meetings are far more expensive than “remote” meetings and practices. That is undoubtedly why the boards are attracted by them. All my close colleagues agree that this reduces the quality and accuracy of the standardisation process. However, it seems unlikely that we will return to face to face meetings.
2. The remuneration of examiners has gradually been eroded. This has led to difficulties with recruitment. Anecdotally, my senior examiner colleagues often complain that the “quality” and level of experience of examiners has declined. There may be several reasons for this, but we believe pay is a key factor. A further facet of this is that, we would like to work with senior, experienced teachers, on the grounds that they make the best examiners. However, many such individuals now pay higher rate tax so their exam fees have 40% taken off the top, further eroding incentives.
3. Examination boards are increasingly “endorsing” or commissioning specialised textbooks. I understand that, in some cases, the boards are receiving royalties. I am in the fortunate position of having published “endorsed” texts, but this practice may be making it more difficult for potentially talented writers to “break in” to the market.

I think, therefore, there is a strong case for insisting that examination boards are “not for profit” organisations. More on this below:

#### THE ISSUE OF EXAMINATION BOARD COMPETITION

On a purely academic level there is no need for more than one examination board. If they all operate with integrity, as I think they do, by and large, there should be no difference in standards between them. Furthermore there is no reason why variety and choice cannot be provided by a single board. I know that teachers, on an informal basis, do believe that some boards are “easier” than others in their subject, that some are more amenable to raising marks on appeal and some are more administratively efficient. However, I think there is not much evidence that this is true. It certainly should not be true!

Competition may be justified on the grounds that it promotes efficiency, ie less efficient boards will decline and the better ones will prosper as a result of a kind of Darwinian process. However, I think the dangers of competition outweigh its benefits. If commercial pressures grow—and I think this is happening—the temptation for boards to attract more candidates by offering them an “easier passage” may well become overwhelming.

I therefore suggest a better outcome is one single examination board, offering maximum choice of specifications and perhaps even types of assessment, with tight regulation of the kind currently conducted by Ofsted and Ofqual.

#### CONCLUSION

As I have asserted, I think everybody concerned is trying to do their best for students and *believes* they are doing their best, but there are now structural reasons why this high degree of integrity may be, albeit involuntarily, jeopardised.

November 2011

## Written evidence submitted by International Society for Design and Development in Education

### HIGH-STAKES EXAMINATIONS TO SUPPORT POLICY: DESIGN, DEVELOPMENT AND IMPLEMENTATION

Paul Black, Hugh Burkhardt, Phil Daro, Ian Jones, Glenda Lappan, Daniel Pead, and Max Stephens or the ISDDE Working Group on Examinations and Policy

#### EXECUTIVE SUMMARY

*How can we help policy makers choose better exams?*

This question is the focus of the Working Group of ISDDE, the *International Society for Design and Development in Education*, reported here. The group brought together high-level international expertise in assessment.<sup>49</sup> It tackled issues that are central to policy makers looking for tests that, at reasonable cost, deliver valid, reliable assessments of students' performance in mathematics and science—with results that inform students, teachers, and school systems.

This paper describes the analysis and recommendations from the group's discussions, with references that provide further detail. It is designed to contribute to current discussions, in the US and elsewhere, on "how to do better".

*What is "better"?*

High-stakes testing has enormous influence on teaching and learning in classrooms—for better or for worse. Teachers give high priority to classroom activities that focus on the types of task in the test. This is understandable, indeed inevitable—after all, their careers are directly affected by the scores of their students on these tests, the official measure of their professional success. Yet this effect of testing on teaching and learning seems to be ignored in the choice of tests by policy makers, who see tests only as measurement instruments. Driven by pressures for low cost, simplicity of grading and task predictability, current tests have a narrow range of types of item that does not reflect the breadth of world-class learning goals as set out, for example,<sup>50</sup> in the Common Core State Standards for Mathematics (CCSS) or, indeed, in many of the state standards that CCSS is replacing. Yet, conversely, high quality exams can help systems to educate their students better. Good tests combine valid and reliable information for accountability purposes with a beneficial influence on teaching and learning in classrooms—ie they are *tests worth teaching to*.

*How do we get better assessment?*

This paper, building on substantial experience worldwide, sets out the essential elements of an assessment system that meets this goal, taking into account the necessary constraints of cost. In brief, this entails:

- Planning assessment, including high-stakes testing, as an integral part of a coherent system covering learning, teaching and professional development, all focused on the classroom.
- Treating assessment as a design and development challenge, first to introduce high-quality instruments which serve both formative and summative purposes, then, later, to counteract the inevitable pressures for degrading that quality.

The task of creating an assessment system to help guide and enhance teacher practices and students' learning should include the following steps:

- Create a pool of tasks from a variety of sources each exemplifying:
  - Research-based understanding of learning and performance;
  - Creative designs;
  - Refinement through trialing in classrooms;
  - Feedback from teachers and others;
- Establish authoritative committees, independent of the test vendors, with the needed expertise to select tasks from the pool so as to balance the tests across performance goals, as summarized in the standards;
- Involve teachers in both the test design and the scoring processes, using the potential of test design and of scoring training as powerful modes of professional development, with built-in monitoring to ensure quality and comparability across and between teachers and schools; and
- Grow human capacity by providing training for designers of curriculum and of assessment.

These recommendations are amplified and justified in the following sections.

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<sup>49</sup> Appendix A gives brief outlines of the relevant experience of the principal authors.

<sup>50</sup> We shall use the design challenges that CCSS present as the lead example throughout this paper, but the principles and processes set out here apply to the assessment of mathematics and science quite generally.

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## 1. THE ROLES OF ASSESSMENT IN EDUCATION SYSTEMS

Good educational systems must have the capacity to evolve over time. Testing systems must also have this capacity, both in relation to their purposes and the actual assessment instruments that are created. Given the more rigorous demands on teaching and learning that have become accepted internationally, exemplified by the US Common Core State Standards, test validation requires a concomitant rigour with a broad range of strong evidence.

To achieve the corresponding educative value, high quality exams will require radical change in system design. The extent of the challenge may be seen by comparing familiar current tests with this extract from CCSS, reflecting international standards for mathematics:

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Examination design should reflect as far as possible the full range of goals of the mathematics curriculum. Anything less would not be acceptable as valid implementation of the intentions of the standards.

The examination systems which will be developed should incorporate an auditing mechanism for checking how well the assessment practice is realizing the intentions. Such a mechanism should identify problems—for example, that the current system of curriculum and assessment is not preparing students for the higher levels of mathematical thinking and reasoning embodied in CCSS, or other international standards.

Policy documents for school mathematics often point to the importance of mathematical proofs, mathematical modeling and investigations in achieving a balanced curriculum. However, these remain “paper expectations” and will receive little attention in the classroom unless there is a suite of required student assessments that will make clear to teachers the need for instruction to pay attention to these aspects of performance.

Most current assessment systems fail to give students opportunity to show the range of desirable performances on educative exams in an environment that supports them in raising their own level of performance. The system sends score reports back to district and school offices but the information most often does not match the purposes of the various users.

The district, which wants a limited amount of data that is valid and reliable, believes that these reports give a fair picture of the level of achievement of students, teachers and schools. Yet the multiple choice tests on which they are based, consisting of short items, assess only fragments of mathematics, not students’ ability to use their mathematics effectively, to reason mathematically about problems.<sup>51</sup>

Teachers may learn a bit about the overall level of students from these reports, but not the kind of information that would enable them to help their students to raise their level of performance. Students may receive a score and a placement in the class as a whole, but with little to no information that could help them understand what higher quality performance entails.

What school systems need is a valid and reliable overall picture of performance of students, classes and schools. In this regard, validity requires tests that are balanced across the performance goals, not just testing those aspects that are easy to test.

What teachers and students need is detailed differential information on their strengths and weaknesses, accompanied by instructional ideas to help build on strengths and to remediate weaknesses. In this regard, valid information can only come from assessment of performance on mathematical tasks that demand substantial chains of reasoning. Most of this feedback needs to be *formative*, detailed, and timely enough to inform action.

Knowing common patterns of mistakes, and locating student performance along the underlying developmental continua of learning in a given class can help teachers plan remediation, as well as change their classroom teaching practices for future students. To stimulate teachers toward this goal, rubrics for scoring and

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<sup>51</sup> It is like only assessing a basketball player by shooting success from the free throw line—relevant but not nearly enough.

sample papers for typical responses at each level of performance on the exam can promote changes in classroom practices. Reports that include typical responses of students at different scoring levels can be used in discussions with students to provide further learning opportunities. Separate scores on different dimensions of tests, along with individual item results, can help teachers improve their practice. Students should see where their performance lies along a progression of learning, so that they also understand the kinds of responses that would be classified as high quality work.

The goal is to make the examination system educative to students, teachers and parents. Timeliness is central—if the exam results, scoring rubrics, and sample papers are not returned promptly, the window of interest, engagement, and learning for teachers, parents, and students will have closed. Teachers and students will have moved on to other parts of the curriculum and have no enthusiasm for feedback that is not currently relevant. Insofar as teachers' can be trained and then trusted to do the scoring themselves or with close colleagues, this speedy response can be secured more easily.

It is clear from the above that high quality assessment is an integral part of a coherent education system, linked directly to the improvement of teaching, learning and professional practice. This should not be a surprise; all complex adaptive systems are like this, with feedback designed to enhance every aspect of system performance. This is the strategic design challenge. In the following sections we describe how it can be, and has been, met.

This strategic view puts the issue of cost in perspective. The cost of various kinds of assessment must be seen in terms of the overall cost of educating a student, approaching 10,000 US dollars per year. Is assessment cost effective in delivering improved education? To make it so is primarily a design and development challenge.

## 2. DESIGN PRINCIPLES AND PRACTICES FOR SUMMATIVE EXAMINATIONS

In this section we outline the principles that guide the design of examinations, intended primarily for summative purposes, that aim for high quality, and the practices that enable these principles to be realized. We start with the principles—the criteria that set out what we mean by high quality. They are fairly non-controversial, probably shared by most knowledgeable people—at the rhetorical level, at least. They are often neglected in practice.

### *Validity*

The key here is to “assess the things that you are really interested in”—to assess students' progress towards the educational aims, expressed in performance terms, for whatever purposes the outcomes of the assessment are to be used for.

While this may seem so obvious as to be hardly worth stating, this fundamental principle is widely ignored in the design of examinations where, for example, the tasks are confined to elements of performance that are easy and cheap to assess.

Another common failure is to specify the outcomes of interest in terms of a simple model of performance in the subject—for example, a list of some elements of performance (usually individual concepts and skills)—and testing these fragments separately. Why is this problematic? Because there is no assessment of students' ability to integrate these elements into the holistic performances that are really of interest—for example, solving substantial problems.

In seeking validity, certain questions deserve particular attention in test design:

*Inferences* Can the user(s)<sup>52</sup> make valid inferences about the student's capabilities in the subject from the test results achieved by that student?

*Evaluation and Decision* Can user(s) evaluate the results and use them in making decisions, including pedagogical ones, with confidence that the results are a dependable basis, free of bias effects and reflecting a comprehensive interpretation of the subject's aims.

*Range and variety* Does the variety of tasks in the test match the range of educational and performance aims—as set out in, for example, “standards” or other specification of the aims of the intended curriculum?

*Extrapolation* Does the breadth and balance of the domain actually assessed justify inferences about the full domain, if the former is a subset of the latter.

*The effects the test have on what happens in classrooms* Both common sense and data from observations show that, where there are high-stakes tests, the task types in the test dominate the pattern of learning activities in most classrooms. Does this influence represent the educational aims in a balanced way?

*Is this a “test worth teaching to”?* Given this inevitable effect on classrooms, this question summarizes a very important criterion of validity.

<sup>52</sup> Of course, different users may wish to make different interpretations—e.g. some may ask of the successful student “will he/she be able to tackle advanced academic study”, others “will he/she be able to apply what has been learned in a particular workplace environment”. An understanding, clearly communicated, of the aims which an assessment is designed to assess, is essential.

Many high-stakes tests do not score well on these criteria. Validity for the users is sometimes justified by using evidence of correlation with other measures: this simply calls in question the validity of those other measures in relation to the aims of assessments being justified. Very often, the effects on classrooms are simply ignored—tests are seen as “just measurement”. Validity of assessments may also be justified by redefining the educational goals to be what the test assesses. The harmful effects are exacerbated if the curriculum aims are expressed in very vague terms: then the test constructors become the arbiters who translate vague aspirations into specific tasks, and these effectively convey an impoverished message to teachers.

### Reliability

Reliability is generally defined as the extent to which, if the candidate were to take a parallel form of test, on a different occasion but within a short time, the same result would be achieved. Clearly, reliability is a necessary condition for validity, but not a sufficient one, and indeed some argue that it should be treated as a component of validity<sup>53</sup>. Some of the main threats to reliability are:

*Occasion variability* The student may perform at different levels on different days.

*Variability in presentation:* The way a task is explained may sometimes be inadequate, and the conditions in which the assessment is attempted may be inappropriately varied.

*Variations in scoring* There may be poor inter-rater or intra-rater consistency—while simple responses to short items can be scored automatically, trained people are needed to score responses to complex tasks. Weak scoring can also threaten validity if the scoring protocol is too analytic, or too holistic, or fails to capture important qualities of task performance. Where raw scores are used to determine grades, variations in the setting of grade boundaries may also be problematic.

*Inappropriate aggregation* Variations in the weights given to different component tasks will threaten both reliability and validity, as will inconsistencies between the scoring criteria for the different tasks included in the aggregation.

*Inadequate sampling* A short test will have lower reliability than a longer one, other things being equal, because a smaller sample of each student’s performance will have greater fluctuations due to irrelevant variations between tasks. To narrow the variety of tasks may produce an unacceptable reduction in validity, so more extensive and longer assessments may be needed to cover a wider variety of performance types with the same reliability,<sup>54</sup> however, if the aggregated tasks are too diverse the result may be hard to interpret, ie weak in validity.

*Variation between parallel forms* For any assessment of performance on non-routine tasks, variation from form to form among such tasks is essential to ensure that they remain non-routine; this can offset “teaching to the test” and stereotyping through repetition of the same tasks from year to year, but it may also introduce irrelevant variability.

*Variation in the setting of grade boundaries.* Where raw scores are converted into grades, the score at which each grade boundary is fixed can have a very marked effect on those with scores close to the boundary: the influence of this feature depend on the number of grades in relation to the shape of the score distribution.

It will be evident from the above that there is strong interaction between reliability criteria and validity criteria. The key principle is that irrelevant variability should be minimized *as long as the methods used do not undermine validity*—there is no value in an accurate measure of something other than what you are seeking to assess. Mathematics assessors tend to be proud that their inter-scorer variation is much lower than, say, that in the scoring of essays in History or English; however, this is largely because current math tests do not assess holistic performances on substantial tasks.

Poor understanding of test reliability causes problems. Ignoring the fine print in all test descriptions, users are inclined to view test results as perfectly accurate and take decisions on that basis. The likely degree of variability in test scores should be published, but the forms and language of communication have to be chosen with care: in common parlance error conveys a judgment that somebody made a mistake, and to say that a result is unreliable may convey to many a judgment that it is not fit for the purpose.<sup>55</sup> Thus, it is important to distinguish between “error”, such as mistakes in scoring, and other sources of “variability” which are either in principle unavoidable or can only be avoided by unacceptable means eg if 12 hours of formal testing were required to improve the sampling range.

### Capacity for evolution

No test is perfect; some are not even adequate for their declared purpose. Further, the educational aims will change. For high quality assessment, it is essential that tests can grow along with system improvement.

<sup>53</sup> For a more detailed account, which give a full discussion of criteria, all of which are discussed here, see Stobart, G. (2001) The validity of National Curriculum Assessment. *British Journal of Educational Studies* 49 (1) 26–29.

<sup>54</sup> A recent US study finds that a broad spectrum test of performance needs to be four times as long as a short item multiple choice test for the same reliability—close to the few hours of examinations common in other countries. See eg Phil. Black, P. & Wiliam, D. The reliability of assessments pp 214–239 in John Gardner (ed) *Assessment and Learning*. London: Sage.

<sup>55</sup> Qingping He and Dennis Opposs (2010) *A Quantitative Investigation into Public perceptions of Reliability in Examination Results in England*. Coventry : Office of Qualifications and Examinations Regulation. Available for download on: <http://www.ofqual.gov.uk/how-we-regulate/133-reliability/415-reliability-programme-technical-advisory-group>

This is particularly important when there are new initiatives, like the current one in the US based around the Common Core State Standards. (It is unlikely that current school systems can immediately absorb tests that fully reflect the aims of these standards; it would be unfortunate if limited first versions were regarded as a long term solution.)

Equally an assessment system should be designed to counter degeneration under inevitable system pressures for:

- *task predictability*—High-stakes tests make teachers, understandably, feel insecure. They seek tests that are highly predictable, built of tasks that will be routine exercises for their students; however, such tests do not assess the ability to tackle non-routine problems—an important educational goal.
- *removal of weaknesses*—Tests of higher-level elements of performance, which present greater design and development challenges than routine tests, will have engineering weaknesses, particularly in the early years. (The weaknesses of familiar tests are ignored.) There will be pressures to remove the novel elements, though the weaknesses could be addressed in other ways.<sup>56</sup>
- *cost containment*—Although the costs of high-stakes assessment are a very small proportion of the overall costs per student, they are often regarded as a separate accountability budget line, ignoring the potential contribution of more valid examinations to enhancing the quality of education.

To support evolution and succeed in resisting these downward pressures requires an active *engine for improvement* within the assessment system.<sup>57</sup>

### *Turning principles into practices*

What is needed to turn these principles into a system that delivers high quality examinations? Two things stand out:

- *Variety of evidence*—Validity demands a broad range of types of evidence, based on a wide variety of types of task; most current systems draw on too narrow a range.
- *System design*—Improvement requires radical change to assessment systems; current systems are not adequate for the design and development of high-quality tests

How do we do better? Both problems need to be tackled together. There are well-established models that have been used around the world. The key features in achieving high-quality seem to involve three elements, each independent but in consultation with each other:

*Task design*, creating a pool of tasks from a variety of sources, each using:

- Research-based understanding of the learning and performance goals.
- Creative designers, with substantial experience in the design of tasks that, taken together, cover the spectrum required.
- Refinement through trialing with students in classrooms, with analysis of student responses and comments from students, teachers and others.

This process, and the design skills involved, is much closer to the design and development of classroom materials than to current test development. For many current systems, achieving this will involve, as part of system improvement, a substantial program of designer training.

*Task selection and test balancing*, under the aegis of an authoritative committee. It is in the balancing of the overall assessment that those responsible to the community embody and weight the elements they want to value. This is a quite different role from creating the range of opportunities that is the responsibility of broad-spectrum task design; they should be kept independent.

*Management of the testing process*, by a competent agency, should again be independent of the task design and test balancing process. We shall say little about this, because there are testing agencies around the world which can handle this aspect well.

As well as formal examinations, other components are important for high-quality assessment. The need to produce the broad range of types of evidence that may be required cannot be met solely by tasks set in the controlled conditions of formal testing. Notable examples are tasks requiring extensive investigation by students, and tasks involving group collaboration. For many such tasks, the scoring has to be done by the school's own teachers. To achieve high quality in these assessments, it is necessary to ensure validity in the

<sup>56</sup> Project work in the classroom presents opportunities for plagiarism or undue teacher "guidance", that have led to its abandonment rather than to positive moves that improve the assessment procedures.

<sup>57</sup> One obstacle to evolution for improvement can be the aim of measuring whether or not "standards have risen" over time—an aim that requires a consistency over time which, in practice, is probably unattainable. Controversy in the UK over such issues led to an investigation by the independent Statistics Commission which concluded that "statutory test data [are] not ideal for monitoring standards over time." Specific research on samples offers a better alternative.

tasks presented to students, some uniformity in the conditions in which they are attempted, and validity in the criteria by which teachers' make their assessments. In addition there have to be procedures in place to ensure comparability in these key features by both inter-school and intra-school assessment and monitoring development programmes.<sup>58</sup> Such developments require sustained effort but several countries or states have set up such systems and tested them to ensure that the assessments produced are comparable in quality to those of external tests, and valuable as complementing in specific ways the results of such tests.<sup>59, 60</sup>

To summarize, we need:

- Much better examinations.
- Regular curriculum embedded tasks, each representing clear learning outcomes.
- Some assessed group work with fair credit assignment.

All this needs to be managed by a system that will ensure the credibility of the results, and that all components are valued. (For example, a rule like “50% of the grade must come from grading “revised” work”, where “revised” means submitted for feedback but not graded, revised after feedback and then graded.”)

There are many other sources of evidence about the positive effects of ways to involve classroom teachers in the system. It brings teachers' expertise into assessment and, complementing this, gives them effective professional development in various ways. It builds their understanding of the system, and of the educational aims of the examination. It builds their confidence in the system, while also helping them to form a positive relationship between summative and formative assessment processes and the use of both in harmony to enhance learning. At the same time, there is ample evidence to show that, with care, a system can be designed to ensure that teachers' involvement does not reduce the reliability of the system.

### *Auditing*

For such a system to move forward consistently it needs mechanisms for checking how well the assessment practice is realizing the intentions. These include:

- Identifying matches and mismatches between the intentions and their realization in the assessment.
- Fixing the mismatches.
- Preparing to improve the assessment by the development of collections of new types of task.
- Working actively for improvement at system level.

We expand on this in Section 5.

### *Inspiring examples<sup>61</sup>*

*Nuffield A-level Physics* in England<sup>62</sup> included work produced under formal test conditions, and other work produced in more flexible situations. In the former category were:

- (1) A multiple choice test of 40 questions (75 minutes) 20%.
- (2) A test of seven or eight short answer questions (90 minutes) 20%.
- (3) Questions on a passage from outside the syllabus to test ability to deploy physics knowledge to new things (150 minutes) 24%.
- (4) A practical problems test in a laboratory: candidates went around eight “stations” to make measurements, suggest possible investigations and so on (90 mins.) 16%.

*In the second category were:*

- (5) A project essay involving researching and writing about a topic chosen by the student—done over about two weeks in normal school time 10%.
- (6) An open ended investigation on a different topic for each student assessed by the teacher who sent in samples, done over about two weeks in normal school time 10%.

This pattern of diverse assessment tools worked well in the normal context of an A-Level end-of-school examination in science.

<sup>58</sup> Black, P., Harrison, C., Hodgen, J., Marshall, B. and Serret, N. (2011) Can teachers' summative assessments produce dependable results and also enhance classroom learning? *Assessment in Education* (in press).

<sup>59</sup> Black, P. (2010) *Assessment of and for Learning: improving the quality and achieving a positive interaction*. Invited paper presented to the June 2010 meeting of representatives of the EU education ministers. Brussels: European Union.

<sup>60</sup> Hayward, L., Dow, W and Boyd, B (2008) *Sharing the Standard? Project Report to Scottish Government*. Edinburgh: Scottish Education Department.

<sup>61</sup> There is a fuller description of these and other successful examples in Burkhardt, H. (2009) *On Strategic Design*. Educational Designer, 1(3).

<sup>62</sup> Pellegrino, J W, Chudowsky, N and Glaser, R (2001) *Knowing what students know: the science and design of educational assessment*. Washington D.C: National Academy Press. Ch 6 p.253–5.

The VCE Mathematics Examination in Australia in the 1990s involved two 90 minute end of year exams. Paper 1 was multiple choice and Paper 2 was extended questions of about 20 to 30 minutes each. During the year there was an investigatory project developed by a panel of experts and of high quality. There were however concerns about the amount of help students received due to the high-stakes nature of the assessment. This was addressed using a post-investigation test which was cross-referenced with the log-book kept by a student during the investigation. In the current system external test and internal assessments by schools each contribute 50% to the total scores, with careful studies of inter-correlations between the two scores to reveal and explore any anomalies.<sup>63</sup>

The novice-apprentice-expert model, being developed in the US in response to CCSS, is one of a number of approaches that may help acceptability:

- *Novice tasks* are short items, each focused on a specific concept or skill, as set out in the standards. They involve only two of the mathematical practices (MP2—reason abstractly and quantitatively; MP6—attend to precision), and do so only at the comparatively low level that short items allow.
- *Apprentice tasks* are substantial, often involving several aspect of mathematics, but structured so as to ensure that all students have access to the problem. Students are guided through a “ramp” of increasing challenge to enable them to show the levels of performance they have achieved. While any of the mathematical practices may be required, these tasks especially feature MP2, MP6 and two others (MP3—construct viable arguments and critique the reasoning of others; MP7—look for and make use of structure). Because the structure guides the students, the mathematical practices involved are at a comparatively modest level.
- *Expert tasks* are rich tasks, each presented in a form in which it might naturally arise in applications. They require the effective use of problem solving strategies, as well as concepts and skills. Performance on these tasks indicates how well a person will be able to do and to use mathematics beyond the mathematics classroom. They demand the full range of mathematical practices, as described in the standards, including: MP1—make sense of problems and persist in solving them; MP4—model with mathematics; MP5—use appropriate tools strategically; MP8—look for and express regularity in repeated reasoning.

The three types aim to present comparable difficulty, but with a different balance of challenge—largely technical for novice tasks, more strategic for the others. “Easy expert” tasks, allowing a variety of approaches, are at the heart of mathematical literacy.<sup>64</sup>

### *System issues in making it happen?*

Designers need to understand the constraints and affordances of the current system, so as to identify which constraints can be pushed and which are immovable.

Policy makers are understandably reluctant to accept that their examinations are inadequate—any change in high-stakes examinations provokes anxiety and a correspondingly strong public reaction. So though the assessment of subject practices, rather than just content knowledge, meets resistance, other subjects can show the way. For example, English (Language Arts) has long assessed writing performances as complex as those proposed for mathematics.

Policy makers need to be convinced they will get a (societal) return for the price of improved high-stakes assessment—both financial and political. Rational arguments can be made but creating broad acceptability is a key ingredient of success. For example, Nuffield A-level physics required convincing key stakeholders (the physics community and university admissions people) and, as a voluntary alternative for schools, did not directly threaten the *status quo*.

The longevity of innovations that do get off the ground is another challenge. In many successful cases, when the system changes inspiring examples can disappear. This emphasizes the need for active *engines for improvement*, discussed above.

### 3. Scoring, monitoring and reporting

A well-designed assessment gives every student the *opportunity to perform—to show what they know, understand and can do* in the subject area.

<sup>63</sup> Stanley, G, MacCann, R, Gardner, J, Reynolds, L and Wild, I (2009). *Review of teacher assessment: what works best and issues for development*. Oxford: Oxford University Centre for Educational Development. See: <http://www.education.ox.ac.uk/assessment/publications.php>

<sup>64</sup> Mathematical literacy is the focus of the Mathematics tests in PISA, the *Programme for International Student Assessment*, organized by OECD, which is now the main instrument for international comparisons of education systems.

*Scoring*<sup>65</sup> is the process of evaluating each student's responses—"evaluating" implies a set of values, usually embodied in a scoring *rubric* that guides the scorer. Society demands that the scoring process is fair to each student's performance, so that two different scorers will give much the same score to the same response; the degree of acceptable variation between scorers varies from subject to subject and country to country. Scoring of essays has much wider variation than scoring short factual answers. The US public likes machine scoring, partly because the score-rescore variation is negligible; there has been less concern that the limits of machine scoring narrow the range of performances that can be assessed, undermining the validity of the assessment. Use of machine-scored essays is increasing, but it too may be shown to limit the range of performances that can be assessed. In the scoring of extended answers, numerical scores are allocated to each part successfully completed. This kind of scoring is often carried out by teams of trained scorers; as is the scoring of rich tasks for which holistic scoring rubrics are used to construct an overall score based on how well the response meets specific performance criteria. As we stressed in Section 2, improving reliability is a valuable goal only if it is not at the expense of validity.

As pointed out in Section 2 above, variation between scorers is not the only limit on reliability. The variation between scores that the same student gets on supposedly equivalent tests is equally important, and often larger. This test-retest variation is usually mentioned, if at all, only in the technical fine print of a test description.<sup>66</sup> The public continues to believe that tests are accurate and that life-changing decisions taken on the basis of test scores are reliable and fair.

*Monitoring* processes are used to increase the reliability of scores. Some are simple checking—for example, that scores from student papers have been correctly entered into computer systems. Others are more profound—for example, *second scoring* by a senior examiner of a sample of papers, or *consensus monitoring*, where groups of teachers examine samples of each others' scoring to ensure consistency of standards. We shall discuss monitoring procedures in context below.

*Reporting* the results may seem straightforward but issues arise there, too. How much detail should be reported? Detailed scores are statistically less reliable than aggregated totals—yet aggregation throws away valuable information. Fortunately, there is a happy trade off here, allowing us to meet the different needs of different users and uses. At one extreme, school systems want a small amount of data that they can believe is valid and reliable.<sup>67</sup> Aggregated scores for classes may provide evidence for teacher evaluation, aggregating further for school evaluation. On the other hand, teachers and students need detailed feedback on responses to individual tasks to guide future work; they are less worried about variability—that a student might have done somewhat better or worse with a similar but different task on a different day. Parents, somewhere in between, want to know about their children's performance in more general terms. How is s(he) doing on numerical skills, on understanding concepts, and on problem solving? All need to know that the information they get is a valid assessment of performance in the subject whether mathematics, science or language arts. So it bears repeating that tests need to assess performance in mathematics or science in a balanced way—an obvious requirement that is far from much current testing.

In summary, different purposes of assessment have a different balance of needs for scoring, monitoring and reporting. Where results are used for formative and diagnostic purposes detailed feedback is needed. By contrast, where the purpose is summative, as in periodic and final course testing, less and less detail is needed, whilst, as the stakes get higher, the need for reliability increases correspondingly.

On the basis of this background, we now outline a set of principles and processes for scoring, monitoring and reporting on examinations that will provide the various groups of potential users the information they need. The key principles are to:

- *Involve teachers* in the assessment processes in various ways as an integral part of their professional practice. This follows from the need to integrate assessment into the processes of education; it is highly cost-effective. Formative assessment for learning in the classroom is built on a mixture of teacher assessment and student self- and peer-assessment. Teacher scoring of their own or colleagues' student tests, with external or consensus monitoring, provides more detailed feedback as well as reliable scores. Teachers can be effective on-line scorers of complex tasks on tests, as indicated by their participation in scoring tests such as the US "advanced placement" examinations in calculus.
- *Use scoring training as professional development*, integrated into the system's improvement program. It is well-established that professional development activities built around specific student response to rich tasks are particularly effective, motivating teachers to focus on key issues of performance, content and pedagogy.<sup>68</sup>
- *Communicate the scoring procedures used*, including any criteria used, in each completed assessment cycle to schools and teachers in a clear and timely way to help inform future teaching and to advise students.

<sup>65</sup> Scoring is usually called "marking" in the UK and some other anglophone countries, while rubrics are "mark schemes". Here we use the American terms.

<sup>66</sup> For many tests, the test-retest variation is not measured, avoiding any alarm the public might feel if the inherent uncertainty in the results were recognized.

<sup>67</sup> It has been said that "School systems don't buy tests; they buy reports."

<sup>68</sup> See, eg, <http://www.noycefdn.org/svmi.php>

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- *Use a rigorous procedure to monitor the reliability* of the scoring. There is a wide range of methods, and international experience with using them. Senior scorers may rescore a sample of the scoring of each scorer and, if the variation is unacceptable, adjust the scores, or retrain or reject the scorer. An alternative is to insert standard papers in the stream of papers for each scorer and, again, take action where needed. Or one can arrange for groups of scorers to meet and reconcile their scoring, using samples under the guidance of an expert chair.
  - *Use the strengths of IT* to support the assessment process. (see the next section).
  - *Involve students* in the assessment processes by returning their work to them as quickly as possible, showing them the scoring rubrics and scored samples of student work at various levels on each task. Student self- and peer-assessment, an essential part of formative assessment, is informed by this review of summative tests. (This is one manifestation of moving students into roles normally used by teachers, a design strategy that generally raises levels of learning.)
  - *Most important*, apparent difficulties in scoring or monitoring some types of task are rarely a good reason for excluding them, if they are important for the validity and balance of the examination, including its quality as *a test to teach to*. There are usually adequate ways of handling the challenges that such tasks pose.

There are many examples of effective scoring of high-stakes assessment built on these principles.

#### 4. THE ROLES OF IT

There is an understandable enthusiasm in various places for computer-based assessment.<sup>69</sup> It appears to offer inexpensive testing with instant reporting of results. Here we shall look at the power of computer-based systems for the various phases of assessment: managing the assessment system, presenting tasks to students, providing a natural working medium for the student, capturing the student's responses, scoring those responses, monitoring scoring, and reporting the results. We shall see that IT, at least in its current state, is invaluable for some of these purposes, useful for others, and very weak for yet others.

- *Managing the assessment system*—Computers can be a powerful aid to the processes involved in large-scale assessment, even with conventional written tests. Scanning student responses saves paper shipping and checking. Presenting responses to scorers on screen and collecting their scores, item by item, within a task allows scorers to work quickly, often at home, and collects data for reporting and analysis. Inserting standard responses that check scorer reliability facilitates monitoring. Most large scale test providers use such systems—and, crucially, they present no obvious problems for a wider range of task types.
- *Presenting tasks to students*—On-screen presentation is always possible,<sup>70</sup> the potential gain is that it allows a wider variety of tasks. Video can be used to present problem contexts much more vividly. Investigative “microworlds” in science or mathematics or science can help in assessing the processes of problem solving and scientific reasoning, enabling students to explore, analyze, infer and check the properties of a system that is new to them.
- *Providing a natural working medium for the student*—This is an aspect that is often overlooked but, if students are to be able really to show what they can do, the mode of working in examinations must be reasonably natural and familiar. In language arts or history, where reading and writing text dominate, word processors provide a natural medium for working, and for constructing written responses. This is a medium that is familiar to most students. However, in mathematics and science, where paper and pencil jottings, sketch graphs and diagrams, tables and mathematical notation are a central part of the way most people think about problems, computers are a clumsy and inhibiting medium. Inputting diagrams, fractions and algebra is slow—a distraction from the problem and an unproductive use of test time. The specialized software that is available takes time to learn, implying changes in curriculum, and standards (see below).
- *Capturing the students' responses*—This is straightforward in the case of multiple-choice or short constructed responses (such as a number or a few words). It is problematic for richer, more open tasks for the reasons explained in the previous point. Currently then, the optimum way of capturing student responses to substantial tasks seems to be through scanning their papers.

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<sup>69</sup> Students who have experienced computer-based tests of mathematics are not always so positive. See <http://www.mathshell.org/papers/dpthesis/> for further detail on many of the points made in this section.

<sup>70</sup> Though students' responses to on screen and paper versions of the same task are not identical.

- *Scoring those responses*—Automatic scoring of student responses to multiple-choice questions and simple, short answer constructed responses to short items is effective and economical. While progress is being made in scoring more complex responses, major challenges remain to machine scoring of responses to complex tasks in mathematics and science which, generally, involve sketch diagrams, algebra, etc, set out in no particular sequence or pattern. There is an ongoing danger that the administrative attractions of automatic scoring tempts school systems to sharply limit the variety of task types and the aspects of student performance that can be credited—a prime example of the degradation of assessment through sacrificing validity to statistical reliability and cost.
- A different, formative role for automatic assessment is to use computers to search for patterns in students' responses that reveal how they are thinking about a mathematical concept.<sup>71</sup> It is a too-complex task for teachers to go much beyond tallying number of items correct and observing major common errors. However, with the right set of questions, a computer can report diagnostic information to teachers that goes well beyond a measure of how much a student knows. Moreover, this information can be provided to teachers and students immediately, ready for input into the next lesson.
- *Monitoring scoring*—We have noted the role of computers in managing and monitoring on-screen human scoring by injecting standard responses from time to time. Computer scoring of essays has been used to alert a second scorer, a valid and less expensive alternative to double scoring all responses. (We know of no comparable development for complex tasks in science or mathematics).
- *Reporting the results*—Computers are an essential tool for handling and reporting data for large scale assessments. However, their limitations in the range of data they can capture mean that there is currently no substitute for returning responses to teachers and students, on screen if need be.

Most commercial computer-based assessment systems offer extensive summary reports and statistical analyses of scores. These are popular with school management, and are a major selling point. The ability to return scored papers to students is less common though not, in principle, impossible.

For designers of a high-quality assessment system, the principle is clear: Use IT for those things where it is strong and avoid it for those where it is weak. Look skeptically at the enthusiastic claims for computer-based testing and scoring systems, especially where their warrants for success come from other subject areas, and ask *whether they can assess the full range of types of performance in mathematics required by CCSS*.

For example, sophisticated testing using batteries of multiple choice questions can capture a large body of evidence from each student. “Adaptive testing” improves this process by selecting the next question based on previous answers. This can be valuable as *part* of the assessment regime, particularly for “diagnostic testing” and rapid coverage of the content curriculum, but currently it cannot test a student’s ability to autonomously tackle a substantial, worthwhile mathematical problem, requiring an *extended chain of reasoning*, without being led step-by-step through the solution and given strong hints as to which mathematical technique to apply at each step.

The danger, though, is that economic pressures will drive computer-based assessment to deliver what is cheap and easy: multiple-choice and short constructed answer tests with the same narrow, fragmented focus that makes so many current “mathematics” tests invalid as assessments of mathematics.

#### *Wider implications of IT*

We conclude this section with some broader questions that need robust answers before the use of IT in the assessment of mathematics is extended. Since they imply changes in both curriculum and standards as well as assessment, they go beyond the main focus of this paper. So we will be brief.

The limitations in the usefulness of computers in assessing mathematics is ironical because computers are central to doing mathematics outside the classroom in everything from simple business calculations to research in many subjects, including pure mathematics. This is not yet reflected in schools where computers and calculators are currently a useful supplement, rather than the powerful replacement for traditional methods for routine procedures that they are elsewhere. Current curricula and tests mean that most students lack any fluency in the use of spreadsheets,<sup>72</sup> computer algebra systems, graphers, dynamic geometry packages<sup>73</sup> and (the ultimate mathematical computing tool) programming. These tools would enable them to realize the power of the computer to develop and support their mathematical thinking. But these aspects of mathematics are not yet integral to most curricula, or to CCSS. This suggests the following questions for the future:

<sup>71</sup> Stacey, K, Price, B, Steinle, V, Chick, H, Gvozdenko, E (2009) *SMART Assessment for Learning*. Paper presented at the ISDDE Conference in Cairns, Australia.  
[http://www.isdde.org/isdde/cairns/pdf/papers/isdde09\\_stacey.pdf](http://www.isdde.org/isdde/cairns/pdf/papers/isdde09_stacey.pdf)

<sup>72</sup> The predominant use of spreadsheets in schools is for data handling and statistics—typically for producing charts and summatives from survey data—their use as a modelling tool is less common.

<sup>73</sup> ...including their use for “original” constructions, not just for exploring a pre-prepared model demonstrating a particular concept.

- *Can computer-based assessments incorporate the authentic use of computers as a mathematical tool?* If students are fluent in the use of spreadsheets and the other tools just mentioned, then the computer will become a more natural medium for working, and assessment tasks can be set, to be answered using these authentic mathematical computing tools. This will require changes to the taught curriculum, to include the practical use of computers in mathematics—a worthwhile end in itself. Students will learn *transferable mathematical* IT skills with relevance beyond their school’s brand of online test platform.
- *Would this help to improve assessment of mathematics?* Paper-based tasks frequently present a blank space for writing and attract there a range of response elements including sketch graphs and diagrams, tables and mathematical notation. While all of these can be handled on a computer, students must either be proficient in using these input devices before the test, or the devices must be very, very simple (and hence constrained in what can be entered). There are dangers: presenting the student with the appropriate tool at each stage of the problem (eg a graph tool where a graph is expected) can easily reduce an open task to a highly-scaffolded exercise which does not assess the students’ ability to autonomously choose and apply the best tools and processes for the problem, or to develop extended chains of reasoning. Inputting answers or other elements of the response is an additional distraction to the students’ thinking. There are examples of “microworlds” that are specifically designed to capture student working but this area of development is still at an early stage.
- *What would you put in an “essential software toolkit” that students would be expected to become sufficiently familiar with to use during assessments?* We have listed above a range of candidate tools, now used in a minority of schools. (Students will still need desk space for paper and pencil sketching.) For each we should ask: Would these tools embody transferable mathematical computing skills? How, and to what extent should these be introduced into the curriculum in typical schools? This is ultimately a societal decision, as it has been over the many decades it has been dodged.
- *In what ways would standards need to change to encourage the use of such tools in curriculum and assessment?* With the faithful implementation of CCSS still to work on, this question is premature. However, if the gross mismatch between the way mathematics is done inside and outside school is to be addressed, it should be central to the next revision. Meanwhile, we must focus on what can usefully be achieved without such change.
- *How can computers help in formative assessment?* Here we can adopt a more positive tone. Given the recognition in CCSS of the importance of modeling, spreadsheets and other computer tools offer rich possibilities for helping students develop their reasoning skills and mathematical practices. At the simplest level, spreadsheets provide a context for exploring relationships, between variables and with data, that develops insight and provides a “semi-concrete” bridge between arithmetic and the greater abstraction of traditional algebra as a modeling tool. More generally, the potential for use, in combination, of online discussion boards, tablet PCs and wireless internet access, to foster a collaborative classroom environment opens up new possibilities.<sup>74</sup>

It is clear that what emerges from further work on these questions is likely to suggest changes in standards and curricula, as well as in assessment, that belong in the future.

## 5. STEERING THE SYSTEM

All complex systems depend for their success on the quality of feedback—in range, depth and timeliness—and the mechanisms for using it to guide improvement in system performance.<sup>75</sup> Here we link the issues discussed above to the roles of assessment in accountability-based management, and how assessment can be designed so as to guide people at all levels towards realizing the system goals.

### *Steering versus “Are we nearly there yet?”*

It has been said that our assessment system seems to have been designed by a 3 or 4 year old in the back seat of a car, repeatedly demanding “Are we nearly there yet?”. It should be clear that the under-achievements of US education systems, partly reflected in that of our students in international comparisons, are not going to be solved overnight. Choosing to go for a quick fix guarantees failure. What *can* be done is to establish directions of change and a program of improvement to move education systems forward with deliberate speed in those directions.

Well-designed assessment provides information on direction, not just on distance. In what ways have we improved, and well as how much? The focus needs to be on the places where student and teacher learning take place—on what happens in classrooms and in teacher professional development. Other system initiatives are

<sup>74</sup> Webb, M (2010) Beginning teacher education and collaborative formative e-assessment. *Assessment and Evaluation in Higher Education*. 35(5) 597–618.

<sup>75</sup> Is education a ‘complex adaptive system’? This has been questioned by complexity theorists on the grounds that it does not use even the feedback it collects at classroom level to steer the system, relying on top-down planning based on gross data.

effective only insofar as they impact favorably on this “zone of instruction”.<sup>76</sup> A distribution of spelling scores in her class may provide either threat or reassurance to the teacher; it does not help her know what to do about it. For that, she needs to know which words each student has difficulty with. With mathematics and science, as with spelling, feedback needs to be specific and detailed on all the relevant aspects of performance. Formative assessment of this kind is at the heart of designing assessment to support policy; conversely, it needs appropriate policy to support this kind of assessment.

Well-designed assessment provides directly much of the information needed to steer the system. Are our students learning the full range of concepts, skills and mathematical practices? How effective are they in using mathematics in their problem solving? Formative assessment uses this feedback week-by-week to guide teachers and students along the pathway of progress towards system goals. Summative assessment shows how far each student has progressed in the various dimensions of performance.

In other areas, assessment provides “canary in the mine” indicators of problems in a wide range of instructional practices that need further evaluation. How are teachers using precious time outside the classroom? Are they working effectively on their professional development? Or are they using the time for routine tasks like grading? How far are our professional development programs being delivered as planned? When they are, what changes are we seeing in teachers’ classroom practices? This kind of question can be answered by evaluative studies, provided these are closely linked to the design goals of the programs concerned. Assessment can provide both stimulus and relevant evidence to strengthen such studies

At system level, similar questions arise? How well is the program that was successful in the pilot schools spreading system-wide? Do we have realistic support for this, in terms of time and human capital for professional development? Is the pattern of pressure, including the various tests, matched to levels of support that enable most teachers to meet the challenges they face? Is the ongoing funding for improvement at a level that shows that the leadership is serious and realistic?

At national level, have we provided school systems with the tools and guidance that will enable their leadership and staff to meet the goals?

#### *Assessment and feedback for teaching and learning*

Let us summarize the discussion in this paper from the perspective of steering the system.

First, let us ask: What should be taught? What should be learned? In CCSS we have a set of standards which, with associated exemplification, provide explicit guidance—on the practices of doing mathematics as well as the concepts and skills needed.

The next question is: How do you “assess the standards”? Again the answer has changed—constructing test items for each line in the detailed list of standards is not nearly enough. Instead of asking, do the items on a test fit one-to-one to standards, we need to ask: Does the set of tasks in each test have the same focus, balance, coherence and depth of practice as the standards? This shift of viewpoint is important because actually “doing mathematics” involves choosing and deploying multiple elements of the standards for the purpose in hand; focusing on the details alone misses the point.

Learning is a web of progressions, so this is the construct to measure—rather than a “trait” one has more or less of. In designing assessments, we should seek to optimize measurement of growth. For this we need tasks along the progression, not just at the end of the line. This includes capacity to achieve progression within each task not simply between tasks—as students can improve a piece of writing as they progress, so they can improve their analysis and solution of a problem in mathematics.

The influence of high-stakes assessment on what happens in classrooms brings a responsibility on assessment designers to consider motivation. It implies that assessments should measure malleable things that can be taught and learned, rather than fixed traits. It also implies that feedback to students should place less emphasis on ranking and grades and more on guidance, tailored to the needs of each individual, on how that student can improve.<sup>77</sup> Current tests are not based on growth constructs. They are especially haphazard in designing for the construct of growth in the bottom third, but also the middle third of the population. What would the assessment that is designed to measure the growth constructs be like? For example, what do students across the bottom third know, understand, what are their proficiencies? Design an assessment with tasks to characterize the syndromes and detect the growth; right now, the task collections do not do this.

Finally, in reviewing the quality of a test, we must ask the key questions:

*Is it worth teaching to?* Either way, it will be taught to.

*Is it worth studying for?* Tests either motivate or demoralize.

#### *Multi-dimensional reporting*

We have stressed that different users need different kinds and quantities of information. There is no problem with this, provided they are all based on a common view of what is important in performance.

<sup>76</sup> Richard Elmore *Improving The Instructional Core*, Harvard Graduate School of education 2009

<sup>77</sup> Dweck, C S (2000). *Self-theories: their role in motivation, personality and development*. Philadelphia, PA: Psychology Press.

So total scores blur together a lot of different dimensions of performance. It is useful for high-level monitoring of progress by a student, a class or a school but it is inadequate for instruction.

Workers in instruction, teachers and students, need the blur clarified through much more detail—separate scores on different dimensions, task-by-task results and, normally, the return of their own work for review. The reports should emphasize malleability and growth, what has been achieved and what needs to be learned, expressed in concrete terms.

### *Consequences and Audit*

No program of innovation plays out as intended—indeed, too often, the unintended consequences have been the major feature of implementation. This should be no surprise. Each of the constituencies of key players (students, teachers, principals, district staff, unions, politicians and parents) have perspectives that will influence how they play their part in implementing the change. It is not possible to predict all this in advance, so success depends on creating a “learning system” that can adjust how it pursues its goals in the light of feedback.

To achieve this, and thus minimize the mismatch of intentions and outcomes, needs regular research on consequences—in particular, how teachers, schools, and districts are, and are not, responding to the assessments. This research will tell us where we are steering. Is it where we want to go? Lack of response or perverse responses may need design modifications. Equally, there may be pleasant surprises that can be built on.

## 6. OBSTACLES TO PROGRESS, AND WAYS OF TACKLING THEM

Finally, we review the *barriers* to developing a high quality assessment component for a high quality education system. For the processes of seeking improvement, these obstacles are no less important because they are largely a matter of perception. Past experience has shown that they can be overcome, and the benefits of doing so.

### *Dangerous myths and illusions*

Looking at the issues around testing through another lens leads to a realization that current stances toward high stakes assessments encourage some illusions with dangerous consequences. Some have been mentioned above; here we summarize why they are misleading:

- *Tests are seen simply as a measure of student achievement*—Accepting no responsibility for their effect on classrooms has led to narrowing the implemented curriculum so students are only educated in mathematics at the “novice task” level of the tests.
- *Most attention is given to the statistical properties of the tests* and the fairness of the examination process, with little attention being given to articulating aspects of performance that are actually assessed, as well as their range and balance. Such actions lead to exams that are reliable assessments of fragments of mathematics and to teachers teaching only these fragments.
- *High quality examinations are too costly*—While it is true that they cost more (10–20 US dollars per student test) than machine-scored multiple choice tests (US\$1–2), this is still only ~1% of the annual cost of educating a student in mathematics—a small price for invaluable feedback plus professional development.
- *Current tests are inexpensive*—While the cost of the test (\$1–2) is small, this omits the great cost of otherwise unproductive “test prep” teaching, which fills many weeks a year in most classrooms (at least \$200 per student, lost to learning mathematics)
- *Teacher scoring is unreliable*, and subject to cheating—Provided the training and monitoring are well designed, evidence shows that comparable overall reliability can be achieved. Grading schemes in use across Europe indicate that this is the case.
- *Assessment is a waste of time*—“No child grew taller by being measured.” This argument reflects the disdain of many teachers and other educators for testing. (A regrettable by-product is that this community has done little to *improve* the tests) Yet the challenge of performance outside the training arena is seen as essential in most fields: in sports, training for the big game; in music, practicing for the concert or the gig; for all of us, going on a course so we can do something better. Further, assessment of the various kinds we have discussed here enhances the teacher’s understanding of the strengths and weaknesses of each student—which, evidence shows, is less than many teachers think.

### *Resources for moving forward*

A wide range of useful resources can be found in a number of countries.

Examination systems that embody the various features commended here are, of have been, in general use in various places. There is excellent work on designing rich, challenging, tasks that can be used to examine students’ mathematical performance as well as to promote students’ mathematical growth and maturing use of mathematical practices

ISDDE has played a role in bringing together designers from many different countries with different views of assessment. These cross-country interactions have already led to design and assessment projects that are taking advantage of varying points of view and experiences to create tasks for learning and for assessment that are of very high quality and that have great potential to “educate” and assess students. One aspect of this work that is especially promising is curriculum embedded assessments. Such assessment tasks can mirror the external assessment system and give students more detailed formative information about their strengths and weaknesses—far from just a total score. Knowing where you are on a progression toward exemplary work can be a powerful motivator.

While the challenges of rethinking large scale assessments with an eye toward their educative potential for students and teachers seems daunting, the progress that has been, and is being made is encouraging. The fact that the conversation and the work are going on across many countries increases the potential that high-quality educative testing practices can become the norm.

## 7. CONCLUSION

The aim being pursued in this study is of fundamental importance if assessment is to be so designed that it encourages the approaches to learning that are needed to prepare students for the future demands of society. Stanley *et al* (op cit.) point out that this calls for a new emphasis on the importance of developing assessment by teachers:

... the teacher is increasingly being seen as the primary assessor in the most important aspects of assessment. The broadening of assessment is based on a view that there are aspects of learning that are important but cannot be adequately assessed by formal external tests. These aspects require human judgment to integrate the many elements of performance behaviours that are required in dealing with authentic assessment tasks. p 31 Stanley *et al* (2009)

This is reflected in a broader way in a paper adopted by the European Council of Ministers in June 2010:

“Key competences are a complex construct to assess: they combine knowledge, skill and attitudes and are underpinned by creativity, problem solving, risk assessment and decision-taking. These dimensions are difficult to capture and yet it is crucial that they are all learned equally. Moreover, in order to respond effectively to the challenges of the modern world, people also need to deploy key competences in combination.”

*(Assessment of key competences: Draft Background Paper for the Belgian Presidency meeting for Directors-General for school education. Brussels: E.U., p 35 section 6).*

## APPENDIX A

### ISDDE WORKING GROUP ON EXAMINATIONS AND POLICY

This appendix sketches some of the experience of the authors of this paper. It was developed from discussions of the working group that included, as well as the authors: Rita Crust, Frank Davis, Robert Floden, Louis Gomez, Vinay Kathotia, Jean-Francois Nicaud, Matthew Rascoff and Betsy Taleporos.

*Paul Black* worked as a physicist for twenty years before moving to a chair in science education. He was Chair of the *Task Group of Assessment and Testing*, which advised the UK Government on the design of the National Curriculum assessment system. He has served on three assessment advisory groups of the USA National Research Council, as Visiting Professor at Stanford University, and as a member of the Assessment Reform Group. He was Chief Examiner for A-Level Physics for the largest UK examining board, and led the design of Nuffield A-Level Physics. With Dylan Wiliam, he did the metanalysis of research on formative assessment that sparked the current realization of its potential for promoting student learning.

*Hugh Burkhardt* has directed a wide range of assessment-related Shell Centre projects in both the US and the UK—often working with test providers to improve the validity of their examinations. He is a director of MARS, the Mathematics Assessment Resource Service, which brings together the products and expertise of this work to help education systems. This often links high-stakes assessment with curriculum and professional development. Currently the team’s Mathematics Assessment Project, led by Malcolm Swan, is developing tools for formative assessment and testing to support school systems that are implementing CCSS. Hugh was the founding Chair of ISDDE.

*Phil Daro* was chair of the writing group that designed the Common Core State Standards for Mathematics. That he was chosen for this role reflects his wide range of experience as consultant and designer at all levels from the classroom to state school systems—for example, as a director of Balanced Assessment for the Mathematics Curriculum, California and American Mathematics Projects, New Standards Project in both Mathematics and ELA, and the current Mathematics Assessment Project. He currently directs the development of a middle school mathematics program inspired by the Japanese curriculum, works on advancing the design and use of leadership tools for change at every level of the educational system, and consults with states and school districts on their accountability systems and mathematics programs. He has served on national boards

and committees including: NAEP Validity Committee; RAND Mathematics Education Research Panel; College Board Mathematics Framework Committee; ACHIEVE Technical (Assessment) Advisory Group, Mathematics Work Group; Technical Advisory Committee to National Goals Panel for World Class Standards, National Governors Association; Commission organized by Council of Chief State School Officers; Mathematical Sciences Education Board of the National Research Council; and many others. He is Vice-Chair of ISDDE.

*Ian Jones* is a Royal Society Research Fellow working with the Shell Centre team on the mismatch between intentions and outcomes in the design of high-stakes tests, particularly the UK Grade 10 GCSE examination. He is secretary of this working group.

*Glenda Lappan* has led the design of a sequence of middle grades mathematics projects in curriculum and professional development. She is currently the Director of the Connected Mathematics Project and Co-PI for the NSF-funded Center for the Study of Mathematics Curriculum. She has served as a Program Director at the National Science Foundation. She was President of the National Council of Teachers of Mathematics during the development and release of the *NCTM Principles and Standards for School Mathematics*. She is past Chair of the Conference Board of the Mathematical Sciences and Vice Chair of the US National Commission on Mathematics Instruction. From 1996 to 2003, she was appointed by the Secretary of Education to serve on the National Education Research Policy and Priorities Board for the Department of Education. Glenda shared a 2008 ISDDE Prize with Elizabeth Phillips, for her work on *Connected Mathematics*.

*Daniel Pead* has worked in the design and development of educational software, including small applets for mathematics education, multimedia products, and computer-based assessment. He directs the IT work of the Shell Centre team, which has included work on a number of assessment projects, notably the *World Class Tests of Problem Solving in Mathematics, Science and Technology* for the UK Government. A recurring interest is how to produce computer-based materials which support and encourage good teaching and assessment practice, ensuring that the technology is a means to an end, not an end in itself. He has recently completed a substantial study of computer-based assessment in mathematics. He is the Secretary of ISDDE.

*Max Stephens'* current research interests are, on the one hand, in student assessment and school improvement and, complementing this, in studying how quite young students begin to move beyond calculation with numbers and become able to make profound generalisations long before they have meet formal algebra in high school. As manager of Mathematics at the body which is now the Victorian Curriculum & Assessment Authority, he was closely involved with the design and implementation of extended assessment tasks in mathematics for the Victorian Certificate of Education. He is a past president of the Australian Association of Mathematics Teachers.

*ISDDE*, the *International Society for Design and Development in Education*, was formed to bring together accomplished people who, around the world, are dedicated to raising the quality of design of educational processes and materials—and to help this group work effectively as a coherent professional design and development community.

The goals of the Society are:

- improving the design and development process;
- building a design community;
- increasing the impact of good design on educational practice.

The members are designers and project leaders with outstanding records, together with some representatives from government agencies and foundations that fund such work. More on ISDDE and its work can be found at [www.isdde.org](http://www.isdde.org)

November 2011

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### Written evidence submitted by Janine Clatworthy

#### EXPERIENCE BASE

##### *Examiner/Moderator*

1987–1999:	Examiner and Senior Examiner for the Western Cape Joint Matriculation Board (English) (South Africa)—team leader and assisted with constructing exam questions etc. (A level equivalent)
1999–2004:	Sub Examiner for AQA (marked all three GCSE Lang and Lit papers at different times)
2005—date:	Moderator for GCSE (AQA) English and English Language, Subject Advisor (English and Lit), Speaking and Listening Advisor . Consistently graded “A”
2011:	OFQUAL Subject Expert (English)
2011:	wrote and had published a series of textbooks (Improving Speaking and Listening: Aiming for Level 4, 5 and 6)

I am currently teaching English at an Academy (an OCR Centre); but was, until July, the Lead Subject Advisor (English) for Tower Hamlets and in that role supported teachers in evaluating and selecting, planning and delivering the new English GCSEs. My comparative grid of the new GCSEs for the four awarding bodies was identified as a model of good practice and is still available at several on-line education sites.

In 2011, I was the only secondary consultant to be accredited by the National strategies in School Improvement in the secondary team.

Prior to 2009, I was a Head of English for over 20 years, both in South African and in English schools. My experience has always been in “challenging” schools catering to the most disadvantaged children in the UK and in Africa.

#### KEY POINTS:

- Supporting the formation of a single Awarding Body/National Examinations body.
- Restructuring of Exam Structure for English and Literature into a model that is simple and yet would offer texts/choices suitable for a wide range of interests and abilities in candidates.
- Removal of current “cottage industry” approach.
- Cost savings ideas.
- Support for new structures for schools.

#### MY VIEWS

##### *When is the borderline not a borderline?*

As long as schools are measured against exam pass criteria, Heads will respond by pressurising middle leaders, who will in turn pressurise staff to ensure pupils achieve a C. This is not necessarily a bad thing and can drive up the expectations of teachers—especially in schools where socioeconomic factors tend to impact progress at secondary level—to a point.

In schools where the 5 A\*–C are an over-riding concern, almost all the school’s energy will be focussed on the C/D border, with insufficient attention being given to those pupils who should be achieving B, A or A\*: ironically, disadvantaging the most able and undermining their clear potential to become university undergraduates and—in the long term—raising their life expectations. Yes, the old chestnuts of the level of family support, discipline and expectation in impoverished households does impact pupil progress, but focussing overwhelmingly on the C/D borderline—and “teaching to the test” has an equally limiting effect.

In consequence, and in the past, coursework was scaffolded so that “Ds could follow the teacher’s pattern, use the teacher’s ideas, as well as their selected and explained quotes to write an essay, which after significant input and redrafting would become a “C”. The “increase” in “C”s initially may have been due to improved teaching and the longer term effect of the National Strategy, but in my experience schools were attempting to convert pupils with FFT (Fischer Family Trust) “D” targets into Cs and this is where the mechanistic over structured and over assisted coursework “interventions” would take place. Hence, my concern around any return to a coursework based assessment model.

Speaking and listening (20% of the entire GCSE) tends to be over-rewarded and hence will redress the “D” achieved in the exam to Exam boards have constantly “improving” results at GCSE S&L putting “pressure” on the exam components to achieve higher and higher marks to achieve a “C” as so many marks are already banked through the assessment in school of S&L.

In truth, collecting Speaking and Listening marks is onerous and entirely subjective. Yesterday, my top set presented a developed role play using *Dulce et Decorum Est* as a prompt—I listened to 32 pupils in 50 minutes (activities on different topics which needs to be done repeatedly in order to secure the three (optimal) distinct marks for speaking and listening), and simply “missed” some of what one pupil out of the last group said. She showed me her notes afterwards.... I am an experienced teacher and a speaking and listening advisor for an Awarding Body so if I find assessment of the slippery entity which is speech, a challenge at times, how are less experienced teachers faring? If we believe that speech should be taught and assessed, as if English was a foreign language then the GCSE course should be structured as MFL courses are with schools having to individually interview pupils for “orals”. Mass assessment is not effective.

In my opinion, speaking and listening, discussion, speeches would all continue in English even if the assessment of this area were to be removed. Outside of London, some authorities have only a handful of EAL pupils whereas within London, as in the Borough I worked in, an entire school may speak English and one other specific language. In which case, what are our goals? To prepare pupils to speak English formally? To prepare students for the world of work? To have fun using our language? To support EAL? Surely, the “fun” and enjoyment could be put back into the classroom by removing the need to assess S&L. Why not separate speaking and listening and have it as an “optional” course or unit taught by drama specialists within the school?

Remove it from English GCSE so that its assessment does not overly impact the statistical C (5 A\*-C incl E&M) and mask progress in reading and writing. What is the *purpose* of assessing role plays in English? Discussion? Individual speeches? The GCSE English/English Literature and English Language course has too many components and yet although English teachers teach and assess the drama technique of role play, we duplicate the study of drama texts with drama teachers teaching drama texts as well as performance at GCSE: a wasteful overlap.

#### THE NEW SPECIFICATION

The new specification with its constant assessment is completely damaging to the education of the current GCSE students. The problem with allowing agencies such as QCDA to “design” GCSEs is that none of the staff in that organisation had to deliver the programme and experience the constant assessment their model produced. I know as I supported its implementation as a Borough consultant, and only when faced with four weeks of teaching and then a two hour or four hour week of assessment—for the next two years—did I fully realise what this looked like for teachers, and for students—who with modular maths and science—are constantly in “test mode”. Knowledge is fragmented, links not made, development of ideas, skills, not always successful because of the “bitty” nature of the course. English isn’t “content”, “facts” it is the development of the ability to read, analyse and interpret text—literary or non-literary; to explore how writer’s write and develop their own skills as authors, poets, polemicists or politicians!

#### ALL FOR ONE OR ONE FOR ALL?

When there are four awarding bodies, it is inevitable that inconsistency of approach will occur as each AB interprets the curriculum: for example, the OCR GCSE English specification allows pupils to take their plans for controlled assessment home which would allow help from family/friends. This is forbidden by the other three Awarding Bodies. This is just one tiny anomaly in a system fraught with “options” for alternative ways of doing things, producing an unfair system.

The level of support and access to resources is controlled by which AB has the greatest market share: AQA and Edexcel dominate the English GCSE market and so offer the “most” in subject advice and support. This is still quite limited with courses usually to be paid for by schools. These courses’ are often designed by people at the Awarding bodies who have been teachers in the past and are delivered by people who have been out of the classroom for 10 years or more, limiting their understanding of the complexities of delivering the spec. Training GCSE teachers needs higher quality input and consistent input to ensure that British children are successful and can compete on the world’s stage.

My view is that:

1. England should have a single National examination body: one set of examinations for all, with no arguments about whose question/text/prep/ admin/assessment practice is easier or not. Schools do not have to spend hours deciding between the labyrinthine complexities of the Boards. This Awarding Body should:

- (a) Be government/civil service not private—the idea of competition to drive up standards *fails* when independent “companies” or charities are in competition for their “share” of the market (read £££!). They will “change” what they offer in order to secure or increase teacher support.
- (b) Be part of the government task force or agency that sets up the curriculum—*separating how we assess from what we assess and vice versa is bad practice in schools so must be bad practice nationally!* This course must connect/progress from Year one–Year 13....no mandarins promoting only KS3 or KS2...the goal is competence at national assessment points: 11, 16 and 18.
- (c) Should offer commonality and choice.

*Make an English for All* course that can reflect the needs of job finding pupils and employers and life...but which can be used for the 5A\*-C criteria (I still support this...but would like it to be six (all taken but one can be **D**)) so that we are offering the grounding that children all around the world receive on:

- “where we and others live”,
- “how we and others lived and what we have done before”,
- “our language, culture and literature”,
- the “language, culture and literature of others”,
- “how our world works” and
- “how we calculate the life, the world and everything!”)

GCSEs in English could look like this:

1. GCSE English for All—a core course that all English children must pass. This should cover all of the *reading and writing* skills that are essential for life in the modern world (writing to inform, describe, explain, advise, persuade, argue; reading for information—summarising, identifying purpose and audience, fact vs opinion etc...including the teaching of spelling, paragraphs, connectives/conjunctions and structure.

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GCSE *Talking English*—two choices:

- (a) an academic one that would feed into A level Language:
  - (i) the history of English
  - (ii) varieties of English
- (b) An oral course (this could be subsumed into GCSE Drama—they could offer the current speaking and listening options much more effectively as English GCSE is already a “catch all” subject).

Assessment would be best with a simple exam structure: a compulsory part (set for all), options questions (questions must have parity of complexity and weight)

Teachers must know what the AOs are (AQA clear OCR awful) and which skills are being assessed (use of imagery/language etc; summary, extracting key points, identifying fact vs opinion; features of persuasive writing etc).

*GCSE Literature*—Establish a “Core Competencies” Unit which is mandatory and will assess the skills we see as essential to feed into A level or prepare students to be critical and enthusiastic readers in life. Then, let schools choose from a wider selection of modules, which must be “examined” in January and June (stop these overly frequent CAs...quality of teaching is disappearing).

The ordering of these units to be chosen at national level so that skills *PROGRESS*...not all schools get this right, which leads to pupils continuously sitting and resitting exams because of ineffective planning which leads to wasting valuable teaching time ...all very dull for pupils. So, why not offer schools choices?

10 Creative option/ Extension Unit: Why is descriptive writing tagged onto English? It belongs with literature – the study of imaginative writing leads to attempts to explore the themes, characters or write in the style of a novel/play or poem being read. The best teachers always encourage learners to try out the ideas and techniques they have studied. So Option 10, should be a unit in which pupils are allowed to ‘recreate’ a text or produce a ‘backstory (prequel) or a further scene or a collection of poems exploring a theme or in the style of a text they have studied. Electronic submission no spellchecker. Spelling and structure to be assessed. Jan or June assessment

Pupils to book sessions and to work directly onto a secure site – offering the possibility of developing their ideas over time. Creative writing is problematic to assess as ideally development in class with teacher input about structure, language and areas of weakness is most effective in developing this set of skills – would this be an area I would allow as coursework? Ideally ‘yes’ but it would then be selected and over structured by C/D borderline teachers.....

Optional units:

Schools to choose from eight (or more) units covering a wide selection of periods/ eras, writers or themes. Schools to choose two. Shakespeare to be an option but not mandatory – he could well form an integral part of an Elizabethan drama unit which could also include Marlow for example; or form a unit in which several of his plays were studied. Alternative units could explore restoration drama, feminist poetry, plays and novels, science fiction, Manga, texts in translation or post colonial writing.

Each unit would have one or a selection of ‘set texts’ (core) and a list of suggested readings from which teachers could select or to which teachers could add tailoring the course to the needs and abilities of their learners. The idea would be that pupils would get a real ‘sweep’ of a literary period or movement rather than the ‘bitty’ state of affairs at present. NB: Whole texts not extracts. Assessment would require pupils to relate ideas comments on sections to the whole or teachers will teach ‘chunks’. Choice of 4 for first year of course

Choice of 4 for second year of course – more challenging texts and *building on the skills of the previous year*  
Assessment in June only to allow development and embedding of skills and to encourage whole text teaching of the units.

Basic (Mandatory ) Unit

Establishing enjoyment of literature and ensuring the teaching and development of a set of ‘core competencies’ or skills. Working on a selection of poems, drama and novel extracts. A guidance list to be produced and ‘The collection’ (one we made earlier for schools who need something already assembled!) to be available on line for download or put out to tender from publishers (competition!). A selection of thematic approaches could be offered.

Schools to select any texts they feel appropriate for their learners – guidance not to be prescriptive about text choice but so suggest breadth and to identify :

- **the skills the texts must demonstrate,**
- **the skills that must be taught**
- **the assessment criteria/focus**

Paper 1: (Open Book) – explore how different writers that you have studied have presented their ideas about war/loneliness/friendship/growing up etc. Choose one theme and discuss referring to poems, plays and novels that you have studied this year.

Paper 2: Question using unseen extracts: pupils must be able to apply their knowledge. 3 sections: choice of two questions on one on drama, one on poetry and one on the novel.

A long time ago I was told that the best model is to “Keep it simple”....so:

- One education department tasked with educating our children, young people and adults—we are not so very different!
- One education Department who commission, run and support the *assessment* of the English Curriculum.
- One curriculum from 5–18.
- One plan for supporting the delivery of the new GCSEs—whether leading teachers or consultants but schools do need and will need support with managing GCSEs. At present some Awarding Bodies offer it, some offer very little...it is a “cottage industry” at present populated by a segment of the teaching population significantly skewed by age (over 60), gender (male) and distance from the teaching experience.

Advantages?

- Gone would be the costs of paying vast amounts for exams.
- Gone would be the costs of exams officers in schools (30–40K PA per officer, per school).
- Gone would be the wasteful bulk production of syllabi, exam papers etc. One syllabus and one science exam...one English exam...*Simples!*

Marking of exams—why not have schools mark the exams (we mark everything else! And are employed by exam boards to mark the very exams that currently teachers cannot mark in schools.) BUT the DFE will need Moderators—to both visit schools during exams (are procedures being followed?) and to do as we do now—send for the top, bottom and a percentage of the rest to “remark” and check that grades have been awarded accurately. The people currently marking are teachers in the classrooms...so why not train everyone, support everyone, and moderate to ensure fairness?

Moderators could run the training in schools...or would that mean they were advisors or consultants.... I know schools need this as the 18 schools I advise p/t for AQA phone me ALL the time.

No CAs...too much time wasted assessing and not enough development/teaching time.

Support—AQA have really expanded the advisory role but the best advisors I have seen are actually old National Strategies advisors moonlighting p/t for the AB. Some of the others have been out of the classroom/out of full time work with education for too long. Careful scrutiny needed.

Resources

- Publishers will be able to produce “collections” more cheaply as all schools will be choosing from the same units....this should increase competition and drive down prices
- Internet sites like Teachit should have been a national resource (not “owned” by AQA) and could be free to all schools, as the dominance of the market share of resources like Teachit affects which AB schools select reinforcing specific Awarding Bodies power and profitability. Pupils’ access to GCSE English is being shaped not by National models but by the market share of an Awarding Body: a worrying scenario.
- Reward exemplar resource producers (pay them) and put their resources onto a shared area (prestige for the schools)
- Produce DVDs, schemes of work, resources, poetry packs, PPT interactive lessons etc etc that can be downloaded by schools (no postage/materials costs—only development)—BUT avoid the National Strategy mistake—don’t ram them down teachers’ throats...let teachers *choose* whether they want to use them or create their own. Alternative SOW to be evaluated by your “consultants” and “accredited” for use in schools.

...hmmm sounds like I’m writing my own job spec here! Having spent so much of my life teaching and assessing English and coaching English teachers, I feel absolutely passionate about changing the dull and dysfunctional assessment system we now have for GCSE—which in reality shapes the actual classroom curriculum of our children.

I am delighted that you are consulting teachers about “change”, and look forward to further opportunities to “have my say” or be involved in any way.

November 2011

## Written evidence submitted by Graham George

### 1. EXECUTIVE SUMMARY

1.1 Now retired, I have had over 40 years teaching experience, mainly of A-level Physics in sixth form colleges.

1.2 I have nearly 40 years experience as an examiner, the last 25 as Principal/Chief Examiner for AS/A2 Physics, from which I retired two years ago.

1.3 Although my direct experience of the examination process has been through being a Principal/Chief Examiner, with one awarding body (Edexcel), I have had experience of other boards and other subjects in my role as Vice Principal of a sixth form college for 17 years.

1.4 During this time I have seen awarding bodies change from being academic institutions to large business corporations, with attendant advantages and disadvantages.

1.5 There are certain advantages of economy of scale, but not, it would appear, in the cost of examinations to schools. A degree of subject specialisation of examination board officers appears to have been lost in the business model approach.

1.6 A single awarding body, or franchising of individual examinations, would undermine the development of specifications, investment in the examination process (eg the development of technology) and support for schools through materials and training.

1.7 Technological advantages should reduce the risks rise of errors in question papers, but there is always a chance of human error. Ofqual (or similar) should monitor this rigorously, with powers to act as necessary.

1.8 Appropriate use of technology can also lead to improvements in the accuracy of marking. It is up to Ofqual (or similar) to ensure that this is the case.

1.9 The commercial activities of awarding bodies in providing materials and training for teachers is a welcome development that has had a positive effect on the preparation of candidates for examinations.

2.0 Against this, the commercial nature of the awarding bodies to become profitable organisations at the tax-payers expense is to be deplored. The Government must find some way to regulate examination entry fees, which are crippling schools and colleges who are struggling to cope in the current economic down-turn.

### 2. INTRODUCTION TO THE SUBMITTER

2.1 I graduated with an honours degree (2.i) in Physics from the University of Durham, followed by a Post Graduate certificate in Education from the University of Cambridge.

2.2 I taught Physics at all levels for five years at the City of Norwich School, which was then a boys' grammar school, before moving for two years to the Swayne School, Rayleigh, a mixed 11–19 comprehensive school.

2.3 In 1972, I transferred as Head of Physics to the newly built South East Essex Sixth Form College (SEEVIC), responsible for some 300 students each year on GCSE/A level Physics and Electronics courses.

2.4 In 1987, I was promoted to Vice Principal of Woodhouse (Sixth Form) College in North Finchley, which I saw double in size from around 500 to over 1000 students by the time I retired in 2004. I continued to teach some A level Physics throughout this time.

2.5 I started examining (O level General Science and CSE) in 1968, moving on to A-level Physics in 1977.

2.6 I was appointed a Principal Examiner, with responsibility for A level Physics Practical papers in 1985, becoming Chief Examiner in 2003. I decided to relinquish this post in 2009 when the new specification was introduced, but I still act as a Reviser for two papers.

2.7 I served on the QCA committee that drafted the National Criteria for the "Curriculum 2000" AS and A2 Physics syllabuses.

2.8 I have written several Physics texts, including co-authoring the current AS and A2 text books endorsed by *Edexcel*, as well as speaking at numerous conferences for students and for teachers.

### 3. ARGUMENTS IN FAVOUR OF AND AGAINST HAVING A RANGE OF AWARDING BODIES

3.1 When I started as an A level examiner with the then University of London Examinations Board, the Board facilitated GCSEs and A-levels. The Board was run by the University, with a high academic input and most of the Principal Examiners were from various universities. There were several such boards across the country, to some extent regionalised.

3.2 An advantage of this arrangement was that each organisation was relatively small and personal, lending itself to effective and efficient subject teams, usually led by an experienced subject specialist. The "Subject Officer" had responsibility for all aspects of the examination process, from commissioning papers to awarding

grades. Thus one person had total control of, and responsibility for, the whole process. The only disadvantage of this was if the Subject Officer was not good at their job—but then this was up to the board to rectify.

3.3 The disadvantage of having several boards, and therefore several A level examinations in each subject, was comparison between boards to ensure comparability. This was done by QCA (or its predecessor), but to what degree of success is open to question. Certainly, 25 years ago, some boards were seen to be “easier” than others. I can remember concern at London when another large board was awarding a considerably higher percentage of A grades in Physics. This led to London gradually increasing its percentage over a year or two to close the perceived gap. This is undoubtedly why the then Government pushed for fewer boards and amalgamations took place, giving us the current model.

3.4 The amalgamation of London with BTEC created a new animal. The marriage between an essentially academic board and a wholly vocational board led to a new business model. Indeed, the examination board now became primarily a business, and a big business at that, as did the other two amalgamated boards.

3.5 The main advantage of fewer boards is the reduction in the number of syllabuses/specifications for each subject, which makes comparison of standards a much simpler task for QCA. This became increasingly significant as the importance to parents and schools and colleges of success in “league tables” mushroomed—there was less chance/need to jump ships to get “better results”.

3.6 Another advantage should have been economies of scale—only one Subject Officer, one Chief Examiner per subject and one Principal Examiner per paper is necessary whether there are 2,000 or 20,000 candidates. I say “should have been” because this does not seem to be reflected in the current cost of entry fees. This is further considered under Section 5 on “Commercial Activities”.

3.7 The main disadvantage, from my perspective, of the increase in size of Edexcel (I can’t speak for the other boards) was the shift of emphasis from being an academic institution to being a business, for which there is a clear profit motive. It is interesting that, as far as I know, none of the current Principal Examiners in Physics works in a university, compared with a significant majority 25 years ago. Edexcel has become rather like the NHS—once hospitals were run (very effectively) by Matrons, who had wide-ranging medical expertise and experience, now they are “managed” (or mismanaged!) by Managers who are generally from a business background.

3.8 I would certainly not wish to see a further reduction in the number of boards as this would severely restrict syllabus development—the current number of 3 English boards provides for different approaches to the teaching of A level Physics, which is to be welcomed and keeps a degree of “competition” between boards. Although this does not appear to be very effective in keeping examination entry fees down, it does encourage boards to improve their offer in terms of materials and training.

3.9 Although the concept of “franchising” may appear to be attractive, this was disastrous when applied to SATs a few years ago. It may control the cost through the tendering process, but the outcomes of the “final product” cannot be effectively assessed until it is too late to repair the damage. Provision of examinations is not like a building project—it cannot run over time and faulty or shoddy workmanship cannot be repaired after completion as students’ futures will have been jeopardised.

3.10 The whole question of specification development would be brought into question. This would be in the hands of a body such as Ofqual, whose ability to do this I would question. I cite as an example the recent ongoing problems between Ofqual and Edexcel regarding the assessment of A-level practical work. The current assessment criteria were agreed between the Board and QCA prior to the introduction of the new AS/A2 s two years ago. Now Ofqual are challenging the criteria as being inappropriate.

3.11 Prior to this, when the introduction of new AS/A2 specifications nationally was being considered, QCA laid down that there must be coursework assessment and that awarding bodies could not set practical examinations—this at a time when the then government was urging a reduction in coursework in order for there to be greater rigour in examinations. Having been a Principal Examiner for practical papers for over 20 years, I could bring a good deal of expertise to bear on this matter. I was horrified at the so-called research that QCA purported to have carried out and their conclusions from the “evidence” that they had collected. As I said to them at the time, a piece of coursework of the quality of their submission would have got very poor marks! Those concerned at QCA in this matter were little short of incompetent.

3.12 From the above, you can see that, based on experience, my enthusiasm for a national examinations body is not overwhelming! “Accountability” would go out of the window. The present system is, to a great extent, self-regulating inasmuch as if a school or college is unhappy with a particular board, for whatever reason, it has the opportunity to go to another board.

3.13 A variation of “franchising” could be for the three main English boards to come to some mutual agreement, perhaps through Ofqual, that each board will have responsibility for a particular subject, so that there would be just one specification for each A-level subject. However, whilst standards would be easier to monitor, the lack of diversity of specifications would undermine progression the teaching and assessment of the subject. Furthermore, teachers have always appreciated the opportunity of choice afforded by the present system.

#### 4. HOW TO ENSURE ACCURACY IN SETTING PAPERS, MARKING SCRIPTS AND AWARDING GRADES

4.1 We have to face up to the fact that whatever examination systems we have, at the end of the day examinations will be administered by human beings and, with the best will in the world, humans make errors. We can only try to keep such errors and their effects on young people to an absolute minimum.

4.2 Coupled with this, we must recognise that nowadays there are more examinations than ever, with literally millions of papers being sat and marked each year. No system can ever be totally foolproof and, statistically, the number of errors each year is fractionally minute and often blown out of proportion, often by the press. I would ask if the number of errors is monitored, board by board, level by level and year by year so that the true nature of the problem (if, indeed, it exists) can be ascertained.

4.3 If, and when, such errors occur, is there a body (Ofqual?) that can demand to see, and subsequently monitor, an action plan from the awarding body concerned?

4.4 Despite my reservations at Edexcel concerning the shift in emphasis from subject expertise to business management, the setting of papers, marking of scripts and awarding of grades are all extremely rigorous processes. Their reliability is very much dependent on the quality of the “part-time” Chief Examiners, Principal Examiners and Assistant Examiners—the buck now finally stops with the Chief Examiner, with no longstop in the form of a Subject Officer with subject expertise. The danger is that these examiners are all busy people, often with demanding responsibilities in other full-time employment.

4.5 Technological advances should enable error free question papers to be more easily produced and the paper production process at Edexcel (certainly in AS/A2 Physics) is certainly thorough and rigorous. Boards have a responsibility to ensure that this is the case in all subjects and at all levels. The Government (through Ofqual?) has a responsibility to ensure that such a culture pervades throughout all the boards and should have the powers to act as necessary to rectify any inadequacies.

4.6 Edexcel instigated “on line” marking some years ago now—indeed A-level Physics, of which I was Chief Examiner, was one of the guinea pigs. This has, I believe, now been followed by other boards.

4.7 Online marking is a very powerful tool with a number of advantages. Properly managed, it can give a much greater consistency in marking, with much closer moderation of Assistant Examiners possible. I remain to be convinced of the efficacy of the standardisation process adopted by Edexcel, but I am assured by them that it is effective.

4.8 Another significant advantage of the on-line system is the mine of information about individual, and groups of, candidates that it can provide to schools and teachers. This is discussed further in Section 5.

4.9 With the advantages in technology, awarding has become a much more exact science—or at least it should be. This is an area of major improvement that I have observed over my 25 years at Edexcel.

4.10 The combination of statistical analysis (statistically significant with an entry of several thousand candidates) and the expertise of a team of several very experienced examiners *should* lend itself to the accuracy of awarding. This is certainly the case with Edexcel AS/A2 Physics papers, although I personally regret that this is now done by Edexcel “on line” rather than by direct human contact of being “round a table”. I do get the impression, however, that we are now being driven by statistics. Here again Ofqual, or its equivalent, should have an important part to play.

#### 5. THE COMMERCIAL ACTIVITIES OF AWARDING BODIES

5.1 In paragraph 3.4 I referred to Edexcel morphing from an academic institution to a large business organisation over the last 20 or so years, which I suspect has also been the case with the other two main English awarding bodies. There are advantages and disadvantages resulting from this, to which I have alluded in Sections 3 and 4.

5.2 One significant advantage, referred to in paragraph 3.6 is the cost savings that should be obtained from economy of scale. That this has not happened is of major concern to schools and colleges throughout the country. After staffing, the cost of examinations is probably one of the next largest cost centres in school budgets. This was independently flagged up by the Governing Bodies of the two sixth form colleges of which I have, until recently, been Clerk. I personally find it highly objectionable that Edexcel has ploughed some £75 million of British taxpayers’ money into the pockets of Pearson shareholders over the last couple of years. I suspect that I am not the only one!

5.3 I know that MPs have been lobbied over this and I feel strongly that this is an area that the Sub-Committee needs to seriously address. Some form of control over the cost of entry fees needs to be exerted by the Government and not simply left to “market forces”.

5.4 This is, perhaps, where there could be some form of “commissioning”, such as all three awarding bodies being offered the same opportunity to offer A-levels, but at a “fixed price”. It would be hoped that all three boards would still offer the main A-level subjects.

5.5 The other commercial activities of the awarding bodies are to be welcomed. The publication of textbooks, teaching and revision materials (many “online”) and training courses has greatly enhanced the teaching and learning process which has a very positive impact on teachers and pupils.

5.6 As is alluded to in paragraph 3.8, it is to be hoped that this aspect of the boards’ provision will give rise to a competitive edge between the awarding bodies to the benefit of schools and their students. The transparency of published mark schemes and the feedback given to teachers had undoubtedly led to an improved standard in the preparation of candidates for examinations. I hesitate to say “the standard of teaching and learning”, but I am sure the two go hand-in-hand. As indicated in paragraph 4.8, online marking has had a significant part to play in this as it enables schools and teachers to drill down to assess the performance of individual candidates, or whole class groups, on individual questions, or even parts of questions. This is a very powerful tool in evaluating the learning process.

November 2011

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### Written evidence submitted by Ian Thow

#### SUMMARY

The key points of this submission relate to the Qualifications and Awards procedures in Scotland for 15 to 18 year olds) which can then be compared to the situation in England. It describes how the Scottish Qualifications Authority (SQA) organises assessments and outlines two different methods of marking which the SQA uses. It also identifies the advantages and disadvantages of these marking processes. Finally, the submission explains, with an example, the issues which arise in Scotland with respect to complaints to the SQA in relation to questions raised (by schools and individuals) concerning the validity and reliability of assessment questions and the accuracy of the marking instructions in the absence of an organisation such as OfQual.

#### MY PERSONAL DETAILS, BACKGROUND AND EXPERIENCE

I have recently retired after 30 years experience as Principal Teacher (Head of Department) of Religious, Moral and Philosophical Studies (RMPS) in a large comprehensive secondary school in Scotland. During my time of employment, national qualifications in Religious Studies (as it was initially named) were established and the first presentations of candidates occurred in 1984. Over the following 25 years various developments in national qualifications have taken place in Religious Studies (later to be called Religious, Moral and Philosophical Studies ,RMPS, from 2000 onward). As Principal Teacher of RMPS I was involved in teaching these courses and presenting candidates for national examinations.

I have also been an examiner with the Scottish Qualifications Authority (SQA) for 15 years at different levels of RMPS (Higher, Intermediate 2 and Intermediate 1). In addition, I have personally written complete teaching Units and assessments in relation to these developments in the Scottish Examination system. I therefore have very wide experience in both teaching the subject and setting questions and marking (as an examiner) with the SQA.

1. I am writing this submission in response to the inquiry that the House of Commons Education Committee is currently holding into the administration of examinations for 15 to 19 year olds. While I note that the current inquiry relates specifically to England, I thought it might be useful to the committee if I were to present information of our situation in Scotland for comparison purposes.

2. As you may be aware, the examination system in Scotland differs from that in England in that there is only one examination and qualifications awarding body, the Scottish Qualifications Authority (SQA) whose annual turnover of candidates sitting national examination is around 160,000. This is obviously a significant contrast to the situation in England in relation to the number of awarding bodies, but it may be worth noting some of the advantages and disadvantages of a unitary rather than multiple awarding bodies.

#### 3. Advantages

- (i) Every candidate sitting an examination in each subject and at each level in that subject faces the same question papers. Currently in Scotland there are Standard Grade examinations at 3 levels (Foundation, General and Credit) Intermediate (levels 1 and 2) examinations, Higher (one level) and Advanced Higher (one level) examinations. The Scottish “Higher”, which is normally sat by 16 and 17 year olds is the standard for university entrance in Scotland.
- (ii) The distinct advantage of the Scottish system is that examinations at all levels are standardised for all candidates who are sitting an examination in a particular subject at a particular level. This can be a useful comparison guide for both individual pupils, schools, further Education establishments and potential employers.
- (iii) Another advantage of this system is that when the marking of scripts takes place, often using central marking (which means that, over a relatively short period of time, all scripts are marked by the same markers on the same premises at the same time) so the quality of marking is more consistent between the different markers. At central marking ,there are also regular quality assurance checks of all markers by

experienced examiners and any marking issues eg severity or leniency or lack of consistency in marking, can be identified and remedied quickly.

- (iv) A third advantage is that new markers can be given individual training “on the spot” and have the benefit of being able to discuss uncertainties and issues while marking with other, more experienced, markers.
- (v) It is also the case that the marking of all scripts for a particular subject can be completed over a few days of intensive marking but this can also have disadvantages.

#### 4. Disadvantages

- (i) As all subjects do not operate a central marking system (mainly on grounds of cost and logistics—subjects with many thousands of candidates and hundreds of markers cannot be accommodated in a central marking situation) then there is a two-tier system of marking in operation by the SQA. The non central marking system involves all markers marking sample scripts sent to them and then taking them to a meeting of all markers for that subject or level and being given indications by the Principal Assessor for that subject about what answers are acceptable or not. This is a major undertaking and is very formal. Markers who attend such meetings complain about their brevity and impersonal nature and about the lack of opportunity (sometimes due to speaking out in such a large meeting—which is intimidating for some) to ask individual questions before they return home to mark scripts over the following three weeks or so. Further, as markers are more isolated in this situation in comparison with a central marking event, there is more emphasis on these markers using their own judgment when faced with issues on scripts or in the interpretation of marking instructions. This marker judgement of particular issues may be valid or not, depending on the experience and expertise of the individual marker. While these markers do have the possibility of contacts with the examiners should any problems and issues arise during marking, it is more than likely that, when markers send back their completed scripts, consistency and reliability may be issues not only across the scripts marked by an individual marker, but also when different markers have marked their scripts. This can raise significant issues of standardisation and validity in script marking.
- (ii) A further disadvantage of non central marking is marker training. The nature of such marker meetings outlined in the previous paragraph raises the issue of the relevant training of markers which is especially important when new markers are recruited, especially when new markers are recruited. One of the key factors that differentiates the two different approaches to marking is that the central marking approach has important benefits and advantages over the more traditional approach. This is because, in central marking, training is much more immediate, structured and “hands on” with immediate feedback and gives such markers, especially new and inexperienced ones, the advantage of immediate access to experienced markers and examiners compared to the alternative.
- (iii) One disadvantage of central marking is marker fatigue. Such events take place at a central location and involve 3x three-hour sessions per day over a period of three or four days. The sheer intensity of this can be an issue for markers. On the other hand, those markers who work from home have their normal teaching responsibilities during the day and then may spend several hours in the evening marking scripts. The situation is better at weekends when normal work is not a factor. There is probably no perfect solution to this situation although, having been involved in both approaches to marking, there is no doubt in my mind that the central marking approach is superior. I also realise that, given the much greater numbers of scripts to be marked in England, then the logistical problems are multiplied many times.

I have explained my current situation in detail as a distinct disadvantage of having a single national awarding body if that body is not directly responsible to an education Ombudsman. We clearly need a Scottish OfQual equivalent to deal with such issues. While there may be issues in England in relation to multiple awarding bodies for qualifications at least there is recourse to OfQual if circumstances merit this.

*November 2011*

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### **Written evidence submitted by Mark McKelvie, Senior Assistant Headteacher, Wetherby High School**

#### EXECUTIVE SUMMARY

1. The current examination system is not fit for purpose as a result of the contradictory nature of private, profit-making organisations setting the national examinations which our children sit.

2. As private companies it is in the examination boards’ interest to maximise their profits. The only main method of achieving this is to make their examination the one which schools will choose. As schools want to ensure that their students achieve their best possible exam grades it therefore follows that examination board which set exams which appear to be more straightforward to pass will be the ones who schools tend to choose. This creates a perverse incentive to lower standards.

3. The specifications for exams also change on a frequent basis. This allows examination boards to make significant profits by selling resources such as textbooks to schools and ensures that this market is sustainable. As the requirements of society alter then the school curriculum must alter but this should be a decision driven by educationalists rather than the examination boards.

4. A proposed solution to the problem is to establish a single examination board which is a not-for-profit organisation. This would allow control to be exerted on the quality of the examinations set and would ensure that school resources are spent in a more effective way rather than paying inflated examination fees and buying new textbooks.

5. A proposed solution to the problem of ensuring accuracy of the marking of exam scripts would be to start the examination diet earlier. GCSE examinations could start at the end of April which would have many benefits. It would inject more rigour into Key Stage 3 courses and ensure that schools became more creative regarding starting the course content in Key Stage 3. This would improve the learning experience which the pupils have at Key Stage 3. In addition earlier GCSE exams would ensure that AS level teaching could begin earlier in the summer term which will provide more teaching time for such courses. Earlier GCSE exams would also ensure that the exam board (singular) had more time to mark and process the examination results.

#### AUTHOR'S BACKGROUND

6. I have an upper second class Honours degrees in Aeronautical Engineer and I have taught in a number of secondary schools in both Scotland and England. I have taught Physics but the vast majority of my teaching has been mathematics. I have ran two successful mathematics department and in my current Senior leadership post I have responsibility for achievement across the school. I also teach a 0.5 full time equivalent maths timetable.

#### THE MAIN ISSUES REGARDING EXAMINATIONS FROM A SCHOOL-BASED PERSPECTIVE

7. The increased accountability which has occurred in education in recent years is welcomed but has resulted in several predictable by-products. Schools want to ensure that their students achieve the best possible examination grades. The examination bodies (as private companies) want to ensure that they maximise their profits. There are many ways which the examination boards can do this. Examples of this would be ensuring that their examinations appears to be easier to pass than the other boards, changing the specification more frequently than is necessary and designing examinations where there is an incentive for students to be entered early which leads to increased revenue streams by creating market for resits.

8. Our children deserve to have their abilities judged and measured by a system that is fair and accurate. Employers, further and higher education establishments must have confidence in the results which prospective students attain. In addition the UK taxpayers should be confident that school resources are being spent in an appropriate manner. Any exam system will cost money but it must ensure that it the taxpayer is not being overcharged and that it is fit for purpose, providing an impartial measurement of the achievements of our young people.

9. It is only by looking at the detail of the impact of having private companies setting examinations that we can fully understand what it is doing to the teaching and learning which takes place in our school. I will use the following specific example which relates to the mathematics examination as an illustration and highlight the key knock-on effects.

10. Prior to 2008 the mathematics exams had three tier of entry—Higher (grades A\* to C), Intermediate (grades B to E) and Foundation (grades D to G). The obvious problem with this was that the Foundation course only went as far as a grade D. This was had a highly demoralising effect on lower ability pupils who were told at the start of year 10 that if the worked hard for two years the best grade they could achieve would be a grade D. Apart for this the three tiers of entry worked very well. The Higher tier consisted of two papers (one which was non-calculator and the other could be completed using a calculator) which were both two hours long. This paper assessed a significant amount of algebra and provided a fairly good preparation for A level maths.

11. The Intermediate papers were slightly shorter but were aimed at pupil who would not go on to study A level maths and as a result the question level only went up to grade B.

12. A decision was made by the QCA to abolish the three tiers of entry which meant that Foundation pupils could achieve a grade C. However the main problem was that scrapping the Intermediate tier meant that if a student had the potential to achieve a grade B they had to sit the Higher paper. This meant that the content of the Higher paper had to be rewritten to make it more accessible to pupils who previously would have sat the Intermediate paper. A direct result of this is that the algebra content of the Higher tier paper was reduced overnight. Indeed only three years later one of four key recommendations of the Evaluating Mathematics Pathways report which was published by the Department for Education in 2010 stated that:

“High attaining students need to develop greater facility with algebra by age 16 and assessments should incentivise high quality teaching and learning in this critical area”.

13. This matter still has not been addressed and as a result, many students who achieve a good grade in GCSE maths struggle to cope with the significant increase in algebraic content and demand at A level. This result in A level maths being viewed as a highly difficult subject with the consequence that the uptake of A level mathematics in England appears to lag behind the uptake of equivalent qualifications in Scotland.

14. I have been teaching mathematics in England for eight years and in that time the syllabus has changed twice. This creates a lucrative market in textbooks, support materials and training courses which the Exam Boards exploit.

#### RECOMMENDATIONS FOR ACTION

15. The following are the points which I would like the committee to consider for action in order of importance:

1. The abolition of multiple exam boards in England and the establishment of an independent, non-profit national examinations board.
2. An agreement that ensures that the school curriculum is not subject to highly frequent changes but remains flexible to the needs and demands of the 21st Century
3. One aspect which would increase the accuracy of marking is to move the exam diets earlier in the year. This would allow examiners more time to mark scripts and as a result, lead to increased accuracy.

November 2011

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### Written evidence submitted by Association of Teachers and Lecturers (ATL)

#### 1. EXECUTIVE SUMMARY

1.1 Education for all is at the heart of ATL's policy principles, and we emphasise the necessity that the examination system's role in education serves the needs of all learners. We believe that coupled with the curriculum set-up, high stakes accountability and supported by weakened provision of information, advice and guidance, it does not currently meet this essential aspiration.

1.2 ATL does not have the same confidence as politicians in the unfettered marketisation of children's education. In the examination system our greatest concerns are the escalation of entrance fees and the for-profit practices of awarding bodies and some of their employees.

1.3 The transparency of awarding body operations and their profits is patchy and a weakness in what must be a publicly accountable system. The teaching profession is deeply concerned by conflicts of interest within major exam boards and the ensuing profiteering focussed around publishing text books and offering bespoke coaching classes.

#### 1.4 Ofqual should:

- investigate the impact of exam boards' range of other activities;
- force clarity and transparency in awarding organisation structures and financial records;
- report more regularly and consistently upon the income aside from exam fees and the full expenditure of awarding organisations—this might include a recommendation on ways of controlling expenditure to reduce unnecessary increases in fees eg a limit on marketing spends (in a similar way to election spending limits);
- take responsibility for proportional fee control, developing a sustainable, ethical and affordable national framework of examination fees; and
- ensure consistent delivery of qualifications and their assessment.

1.5 Government should work with Ofqual to ensure the right type of regulation of the examinations system is strengthened, and government must also take into account the broader educational picture. The pressures of a high stakes accountability atmosphere when coupled with the overly-commercial behaviour of awarding bodies lead to perverse but perfectly rational decision-making by teachers which threatens to undermine the quality of education offered to young people.

1.6 ATL believes that money designated for children's education should be spent in ways that most benefit learning and we propose that the examination system should be run on a not-for-profit basis under the profession's input and guidance.

#### 2. ABOUT THE ASSOCIATION OF TEACHERS AND LECTURERS

*ATL, the education union*

2.1 ATL, as a leading education union, recognises the link between education policy and our members' conditions of employment. Our evidence-based policy making enables us to campaign and negotiate from a position of strength. We champion good practice and achieve better working lives for our members.

2.2 We help our members, as their careers develop, through first-rate research, advice, information and legal support. Our 160,000 members—teachers, lecturers, headteachers and support staff—are empowered to get active locally and nationally. We are affiliated to the TUC, and work with government and employers through partnership and by lobbying.

### ATL policy

2.3 ATL believes that teachers as professionals must be recognised for their knowledge, expertise and judgement, at the level of the individual pupil and in articulating the role of education in increasing social justice. Within light national parameters, development of the education system should take place at a local level: the curriculum should be developed in partnership with local stakeholders; assessment should be carried out through local professional networks. Schools and colleges are increasingly encouraged to work collaboratively to offer excellent teaching and learning, and to support pupils' well-being, across a local area. Accountability mechanisms should be developed so that there is a proper balance of accountability to national government and the local community, which supports collaboration rather than competition.

### 3. INTRODUCTION

3.1 We welcome the select committee's inquiry into this important issue, and particularly the emphasis on whether the current system "delivers the best and fairest outcomes for young people". Education for all is at the heart of ATL's policy principles, and it is worth emphasising that it is essential that the examination system's role in education serves the needs of all learners.

3.2 It is clear that the British education system has become increasingly commercialised at all levels in recent years. ATL does not have the same confidence as politicians in the unfettered marketisation of children's education. In the examination system our greatest concerns are the escalation of entrance fees and the for-profit practices of awarding bodies and their staff.

3.3 Though it is over a year since the views were made public, we hope that this inquiry leads to proper political scrutiny of Mick Waters' description of the exam system as "diseased" and "almost corrupt".<sup>78</sup> A variety of subject bodies have expressed concerns about the way 15 to 19 examinations are run; we are sure they will submit evidence too. We hope that the select committee is able to add to the evidence base in this area and help move debate beyond the anecdotal.

3.4 The transparency of awarding body operations and their profits is patchy and a weakness in what must be a publicly accountable system—we have found it difficult to find a very clear picture of the big organisations, their subsidiaries, parent organisations, which are limited companies and which are charitable bodies, and the money made across these complex structures. The average member of the public, and of course individual teachers and school and college leaders, should not be expected to go to great lengths to find such information should they want to. We are aware that the regulator also finds its job in this regard, and in tracking money in and out, difficult.

### 4. HOW THE EXAM SYSTEM CONTRIBUTES TO UNDERMINING EDUCATION

4.1 ATL believes that, within a light national framework of entitlement, the curriculum should be developed locally. It should start with pupil needs and interests and be designed in terms of the skills and attitudes that we want pupils to acquire and develop.<sup>79</sup> Whilst it is important for schools to be accountable, we think it is right that this sits more comfortably alongside professional autonomy. There is a need to re-balance the accountability system which gives undue weight to central government in comparison with other stakeholders to whom schools have a responsibility.<sup>80</sup> At the heart of this are performance tables with the consequences of high pressure on schools and the proliferation of perverse incentives

4.2 Amongst those perverse incentives are the need for schools to prioritise the passing of exams over the depth and quality of teaching and learning. It is not hard to find critics of dependent learning and teaching to the test, and ATL has been amongst the most outspoken. This is a sad reality to those in the profession and undermines the development of young people's skills for life and employment as well as their love of learning. The way the examination system has developed has led to awarding bodies' primary concern being to sell examinations to schools. As one stakeholder, the Campaign for Science and Engineering in the UK,<sup>81</sup> puts it: "They are therefore incentivised to offer schools attractive packages. Schools, via league tables and other mechanisms, are incentivised to achieve the best examination results for their pupils. If one way for schools to achieve this is to choose a more attractive examination package, then they may well do so. Over time this may lead to degradation in standards". Whether this is borne out in practice or not, the risk of it being so should be of the utmost concern to all involved in education.

4.3 In a 2010 article Warwick Mansell offers further anecdotal evidence of how decision-making in schools can be influenced—from looking for exam boards with "predictable" papers to being advised by senior examiners of difficult areas of teaching and learning that can be avoided without risking grades.<sup>82</sup>

<sup>78</sup> In *Reinventing Schools, Reforming Teaching* (2010), Bangs, MacBeath & Galton, Routledge—as reported by *The Independent* (<http://www.independent.co.uk/news/education/education-news/system-of-exam-boards-corrupt-and-diseased-says-leading-schools-adviser-2081694.html>) and other media outlets. Mick Waters is the former head of the Qualifications and Curriculum Authority.

<sup>79</sup> <http://www.atl.org.uk/policy-and-campaigns/policies/subject-to-change-new-thinking-on-the-curriculum.asp>

<sup>80</sup> <http://www.atl.org.uk/policy-and-campaigns/policies/new-accountability-for-schools.asp>

<sup>81</sup> <http://sciencecampaign.org.uk/?p=2829#10>

<sup>82</sup> Mansell, W (2010), Conflicts of interest with exam boards, in *Education Journal*, issue 125.

## 5. CONFLICTS OF INTEREST

5.1 There is a strong feeling in the profession that exam boards have cornered the market in text book provision. Edexcel's text books which are directly aligned (or "grade-focussed to help every student succeed" as the organisation markets them themselves)<sup>83</sup> to each of the A Level modules are difficult for heads of department to ignore. This puts particular pressure on school funds when marginal syllabus changes are matched by refined text books every two to three years. The limited shelf life and premium prices take more money than is necessary from the public to the private sector.

5.2 Of course text books are only published if they will be profitable. So schools looking to take on syllabus options that are less popular nationwide may find that their students have less access to support than those who study the most popular modules. Uniform courses emerge and innovation and choice are stifled. As with the dilemma schools face when considering a specification change and taking on board the cost of changing text books, motivations on an educational basis can easily become secondary to other pressures.

5.3 ATL's members have also expressed their concerns with regard to the conflict of interest of senior examiners running revision classes for students sitting the papers they have set. In some instances these same examiners continue to take classes in schools and colleges in the subjects they have compiled exams for.

## 6. MONEY IN EXAMINATIONS

6.1 An ATL headteacher estimates a cost to a medium-sized secondary school of £100,000 a year for entering students into external exams as a five-fold increase in costs over two decades.

6.2 According to Ofqual, the amount secondary schools in England pay for qualifications fees rose from £154 million in 2002–03 to £281 million in 2008–09.<sup>84</sup> The regulator estimates that the total market for school and college spending on exam boards' services is worth £453 million—which is worth pause for thought, particular in the difficult economic and policy climate currently being faced.

6.3 Bearing in mind the concerns of conflict of interest and profiteering we have raised, ATL is not surprised to see that Edexcel has such considerable income, and recorded almost a 40% rise in income between 2005 and 2009.<sup>85</sup>

6.4 These figures demonstrate the money swimming around examinations in British education and they are concerning when the priority should always be the education of every young person. ATL would prioritise work towards fee control above wholesale restructuring of the number of players in the market.

## 7. THE RIGHT TYPE OF REGULATION

7.1 At the heart of dealing with the issues raised in this submission and prioritising action is the strengthening of formal regulation of exam boards via a powerful Ofqual.

7.2 An ATL member working in an FE college raises the inconsistent delivery of BTEC qualifications across institutions, and the role of the awarding organisation in encouraging short cuts (to good grades):

"Our primary long course offer is made of the Edexcel qualifications at levels 1, 2 & 3 which we deliver as vocationally as possible, using local facilities and partnerships with employers. We are finding that other local institutions are offering the same qualifications but delivering them in half the guided learning hours or without any vocational grounding which means that students do not have a firm understanding of the application of practise to theory. This seems to devalue the qualification and leads local employers to question its worth. Furthermore, Edexcel have removed the role of external verifier in favour of a locally appointed internal verifier. This has led to certain local institutions award a very high number of distinction stars, however when the students have arrived at our college, we have not noticed the student demonstrating this exceptional grasp of their subject. In general we feel that Edexcel are allowing institutions to deliver the BTEC qualifications in a fashion that will lead to the undermining of the qualification in the eyes of employers".

Ensuring consistent delivery is exactly the sort of intervention that the regulator should be making. Compromising guided learning hours will only become a greater issue with the government's move to not count vocational qualifications as multiple GCSEs in performance tables.

7.3 Ofqual should:

- force clarity and transparency in awarding organisation structures and financial records;
- investigate the impact of exam boards' range of other activities and consider SCORE's<sup>86</sup> recommendation that Ofqual works to break the link between specification/assessment development and the commercial publications that provide resources in support of a specification;

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<sup>83</sup> *ibid* (cited).

<sup>84</sup> <http://www.ofqual.gov.uk/files/2010-03-19-Annual-Market-Report.pdf>

<sup>85</sup> *ibid* [page 28] and its 2011 (August) equivalent [page 33].

<sup>86</sup> The Science Community Representing Education—see <http://www.score-education.org/media/6288/ofqualja2011.pdf>

- report more regularly and consistently upon the income aside from exam fees and the full expenditure of awarding organisations—this might include a recommendation on ways of controlling expenditure to reduce unnecessary increases in fees eg a limit on marketing spends (in a similar way to election spending limits);
- take responsibility for proportional fee control;
- develop a sustainable, ethical and affordable national framework of examination fees; and
- ensure consistent delivery of qualifications and their assessment.

## 8. OTHER COMMENTS

8.1 There are pros and cons in moving from an examinations market to a single awarding body. On the plus side it would reduce the profiteering of a competitive marketplace and make it easier to run a not-for-profit service. The downsides would include the risk of greater fees increases in a monopolistic situation and a possible reduction in the desire to innovate. Representing staff across education, ATL would be concerned that the post-16 sector and its learners would be losers as a single body consolidated efforts around a core service and was not pushed into a range of qualifications suitable for diverse cohorts of young people. Having specialist bodies, often small in size, for vocational qualifications is a stand-out benefit of the current system.

8.2 Whether one awarding body or more, what is important to young people and the schools and colleges they attend is that there is an adequate yet sensible number of qualifications offering a suitable range of choice in subject, learning style, skills developed, assessment methods and so on. It is essential however the examination system looks that impartial information, advice and guidance is accessible to all pupils to help them navigate the decisions that lie in front of them. The government is currently doing precisely the opposite in cutting services and amending existing legislation.

8.3 The vast array of qualifications and assessments and consequent size of the major awarding bodies' operations may be one potential cause of the script errors of summer 2011. The inaccuracy of papers poses huge problems for individual students in high stakes situations and, as last summer showed, creates a loss of confidence in the system and speculation around the suitability of awarding bodies' methods of correction once the papers have been sat. ATL trusts the regulator to find an appropriate and proportional way of dealing with such occurrences both in retrospect and in assisting awarding bodies to eliminate these errors in the first place.

## 9. CONCLUSION

9.1 Irrespective of the number of awarding bodies that exist and the structure of the "market" ATL believes that money designated for children's education should be spent in ways that most benefit learning and we propose that the examination system should be run on a not-for-profit basis under the profession's input and guidance.

9.2 Government should work with Ofqual to ensure the right type of regulation of the examinations system, and those organisations operating (within) it, is in place. In improving the way the examinations system works, government must also take into account the broader picture, in particular the weaknesses of its approach to curriculum, careers advice, and school and college accountability. The consequent pressures of a high stakes atmosphere when coupled with the overly-commercial behaviour of awarding bodies lead to perverse but perfectly rational decision-making by teachers which threatens to undermine the quality of education offered to young people.

*November 2011*

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## **Written evidence submitted by National Association for the Teaching of English (NATE)**

### EXECUTIVE SUMMARY

*The key points NATE would like to make in its submission to the inquiry are:*

- Though there are some issues with multiple awarding bodies, this should not result in the formation of a single awarding body;
- On balance, the existence of a number of awarding bodies is of benefit to schools and teachers;
- Proper investment in experienced subject specialists and robust standardisation systems is critical to an accurate and reliable examination system;
- The commercial activities of awarding bodies need to be monitored to ensure they do not have detrimental effects on students' experiences of teaching and learning between the ages of 15–19.

### *Arguments for/against having a range of awarding bodies*

1. In general, NATE would feel that it is beneficial to have a range of awarding bodies offering differing specifications leading to qualifications in English, English Literature and English Language to GCSE and A Level.

2. The key benefit of a number of awarding bodies offering equivalent qualifications is that teachers are able to choose from a range of options when considering which awarding body to select. Within English, it is likely that specifications from different awarding bodies would offer alternative choices of set texts and perhaps different models of assessment (eg which elements of the specification are completed as examinations and which as ‘controlled assessment’). The choice offered by a number of awarding bodies gives some measure of autonomy to teachers and puts some power into the hands of the profession.

3. A single awarding body would result in a narrowing of options for teachers and therefore no opportunity to use their professional judgement in selecting the most appropriate specification for their students. It is likely that the result would be a further narrowing of the curriculum between the ages of 15–19.

4. It might also be argued that the measure of competition that results from the existence of a range of awarding bodies means that there is a clear incentive for those bodies to be seeking to develop the best possible specifications for teachers.

5. The standardisation of curriculum and assessment that might be brought about by a single awarding body might be seen to offer equality of opportunity, and ensure that all students are assessed on the same content to the same standard, but there ought to be ways to ensure that equity issues are addressed even with the existence of a range of bodies. The regulating body for the approval of specifications should be fit for purpose in this respect.

#### *How to ensure accuracy in setting papers, marking scripts and awarding grades*

6. It is critical that experienced teachers of the subject—eg English—hold the positions of principal examiners within each specification, and that these individuals are supported by a team of senior examiners who are also experienced subject specialists.

7. It ought, ultimately, to be the principal examiner who is responsible for the setting of a given paper, but their decisions should be informed by the expertise of the senior team, which in turn is informed by the feedback of teachers involved in the teaching of the specification. There should be a transparent means by which teachers’ evaluation of previous examination papers can feed into the setting process.

8. Principal examiners from across different specifications ought to meet—under the eye of a body like OFQUAL—to ensure that there is parity between the papers of different bodies for the same level of award.

9. The marking of English is a problematic area; no matter what the assessment criteria put in place, we would argue that there is also a measure of interpretation in the awarding of marks.

10. Given this, it is critical that those marking English exams in both Language and Literature are experienced teachers in the field, and that they are properly inducted into the examination marking process and that a standardisation process is in place that helps to develop consistency across markers. Within English the standardisation process ought really to be a face to face exercise, where groups of examiners meet—under the guidance of a senior examiner—to look at the question paper and mark scheme, to examine sample answers and to agree “the standard”. Traditionally this has been the model of English examination marking—certainly at “A” Level. We worry about the increasing dominance of “online” marking and standardisation of English examinations, and the effect this may have on consistency and accuracy.

11. A system like that described above clearly has costs; we believe, however, that to maintain a functioning, reliable and accurate marking system then investment has to be made at every level of the process. This includes paying individual examiners an appropriate amount per script to encourage experienced colleagues to become involved. A robust system cannot be run “on the cheap”.

12. Grade award meetings should take place where the marks of the cohort are analysed by senior members of the awarding body and compared to previous years to ensure that grade boundaries are set at the appropriate level to ensure year on year consistency.

#### *The Commercial Activities of Awarding Bodies*

13. This is a difficult area. On the one hand, it is obviously useful for teachers to have access to resources and training courses that are produced and run by the awarding bodies themselves. Teachers can expect such things to come with a “quality mark” given that they emerge from the awarding bodies themselves.

14. On the other hand, the risk is that teachers see, for example, a text book linked to a particular specification to be the “course book”. Such a response may lead to the narrowing of the curriculum for students and the danger that the experience of Key Stage 4 or Post-16 for students simply becomes training for a particular examination.

15. There is, too, the economic question; ie to what extent is it fair and right that individuals working for awarding bodies, and awarding bodies themselves, make additional monies from cash-strapped schools by publishing resources and running training that teachers may feel under pressure to invest in? School already pay to enter the examinations, of course.

16. It might be fairer if all publications/training etc. produced by an awarding body were to be free to schools entering students for its specification.

17. It would also be helpful if awarding bodies could make clear that the purchasing of specific texts was not necessary for examination success, and that students should be following a broad Key Stage 4 or Post-16 course. Good teachers, including good English teachers, would avoid the “course book” approach, but it is the case that teachers are under enormous pressure given the highly results-driven, performance educational culture in which we all live.

*December 2011*

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**Written evidence submitted by William Godsoe Rigby**

1. I am a former Mathematics teacher who rose to Head of Department. I took early retirement last year to further my career as a Maths Consultant and I currently hold various positions with examining bodies.

2. I taught Mathematics for 30 years in a number of schools including Middle schools and a High school/Sixth Form College.

3. In addition, I have worked as a Mathematics Examiner/Senior Examiner/Chief Examiner/Chief Moderator for a number of examining boards since my early days of teaching in the early 1980s.

4. I was also a member of the former QCA KS2 Test Panel for Mathematics.

5. This brief memorandum supports whole-heartedly many of the outstanding initiatives to promote good teaching and learning in Mathematics that examining bodies undertake, in addition to their roles as Assessment providers. This lack of monopolistic power is a vital element of the education system in England and Wales. I am sure that observers that are called to give oral evidence will expand upon these points far more eloquently than I, hence I will move on to my main points.

6. In my considerable experience there is one examining board that is less interested in providing quality Mathematics education, however and it is privately owned by the Pearson group. I do not believe that private gain should have any role in education and following the fiasco with KS3 tests in the recent past I would encourage the committee not to recommend a return to a single examining provider, especially when they are non-public. Whilst the very large majority of examining boards (charitable in some cases) work to the standards and guidelines set by Ofqual, or its predecessors, I have experience of and continue to see the Edexcel examining board doing otherwise.

7. We see Ofsted “showing its teeth” when it feels the need to do so. Why then, does Ofqual not do the same? The regulator is not currently regulating in my view and it is not enforcing a consistency of standard across the industry.

8. To give an example, last April myself along with a significant number of Chief Examiners for Functional Skills Mathematics from all examining boards, were invited by Ofqual to compare a sample of Level 1 and 2 FS Maths papers. Whilst we worked solidly for 3 days comparing and delivering full evaluations of each question on each paper to the Ofqual staff, we were told a report would be presented documenting our findings at a later date.

9. One of the examining boards was found, not only by myself but by a number of other CEs to be providing consistently easier examinations (not matching the FS criteria) than the other boards, whilst at the same time it had the lowest grade boundaries for a student to achieve a L1 or L2 qualification!

10. I alerted a senior member of the Ofqual staff to this clear discrepancy and was assured that this would be picked up in the CEs grading and would be in the published documentation. It did concern me however; to be told that a number of Ofqual staff was recent employees of Edexcel. I had witnessed this situation before at QCA.

11. To this day I have neither seen nor heard of any Ofqual report being published, nor those vital statistics being in the public domain.

12. Again, earlier this year, one of my Standardisation meetings was inspected by an Ofqual representative. I welcomed his input only to discover that he was not a Mathematician! I am pleased to see that Ofqual have advertised for subject specialists and this is an excellent move in the right direction.

13. As the “new” Mathematics GCSE curriculum began in Sept 2010, all examining boards were required by QCDA to produce specimen papers which met their required standard. For some examining boards this was a big shift from producing Maths GCSE exams which merely tested the content of the KS4 National Curriculum to questions where students are required to think, use and apply their knowledge to the individual question. Needless to say, under the new specifications (for first certification next June) it is harder for a student to gain a grade C than it was previously. Or at least that was the intention. A great opportunity to raise the standards of teaching and learning and give students the Mathematical ability to have transferable skills for their lifetime and not just to pass an examination. As these new exams can be modular, the first exams were taken last March for all boards. What did all exam boards find? Students, not surprisingly, found these exams more difficult.

But rather than stick to the regulations, Edexcel (realising they could lose market share) sent out their Senior Examiners to centres telling them that now their papers had been passed by the regulator, the next papers would be much easier. Sure enough, last June, the questions were more like the old(legacy) questions and they were back to square one whilst the other boards consistently provide challenging papers with the correct balance of AOs1,2 and 3,functionality and percentage allocations for levels.Ofqual saw this and raised the Edexcel grade boundaries, but they are missing the point. For as long as a single exam board is allowed to provide easier examinations, even if its quality is not that which is required, there will never be consistency and improvements in teaching and learning will only be sporadic. At a time when we need our youngsters to have the best possible Mathematical education, this is being compromised by Edexcel policy and Ofqual are failing in their remit.

14. My final point is that with the influence of Pearson, Edexcel have secured an “additional window” next March with an examination on the old(legacy) specification. No other exam boards were allowed to do this but I am only too aware of the influence that Pearson has in the education of the youngsters in our country. More importantly, the influence it appears to have with Ofqual and the former DCSF. This should never have been allowed as schools are simply “teaching to the test” with vast entries from years 10 and 11 to get their “C” at the cost of their real Mathematical education. Pressure from Headteachers on Heads of Mathematics to get them up the league tables is the root of all these problems, rather than giving their students Mathematics for Life!

15. In the above I have given a factual account of my experiences. I do believe in a market with various examining boards, many of whom provide a very good service and I see no good coming from a single government based exam board. However, Ofqual must have the same strength re exam boards as Ofsted with schools and with subject specialists from next year this is a positive move. I continue to be concerned with the power of Pearson in the education lobby, apparently allowing its satellites to run rough-shod over DfE policy and find its position a most dangerous and unhealthy one.

*December 2011*

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### **Written evidence submitted by Prit Pat**

#### RE GCSE ICT AQA SYLLABUS—CHEATING

I am writing to you to tell you about the widespread cheating in controlled assessments that are currently taking place. I have direct experience of this on the AQA GCSE ICT course. On this course, pupils must do one exam and two projects (called “controlled assessment unit 2” and “controlled assessment unit 3”). The controlled assessments are worth 60% of the GCSE. The following examples, by the way, are only a few I could give you. I have informed both AQA and Ofqual but neither has taken any action of any kind.

1. Unit 3—pupils \*have\* to be given a choice of assignments and should pick one. The idea of choice of projects is an integral part of this unit’s specification. Many teachers however have a class all doing the same assignment. How is this possible? Is it because (a) the teacher “encouraged” them all to do this or (b) chance? With 32 students in a class, the odds of all the pupils picking the same assignment is two to the power of thirty two, or a little over 4,000,000,000. Pupils must be given a choice yet the Exam Board does not ask schools to account for the highly unlikely situation where everyone in a class is doing the same assignment. And Ofqual aren’t interested in asking exam boards to account for this either.

2. Unit 3 Assignment eg “How to organise a school prom”—this is the project discussed at teacher training days, to help teachers understand what they have to do. However, more often than not, teachers decide to set up and practice an identical task, except it is called “How to organise a Christmas party”. Absolutely every task that they have to do is identical to the school prom task. The class does it together. They discuss each and every task, the teacher corrects mistakes, gives feedback and the pupils fill their folders with fabulous examples of each task. Then they do the “How to organise a school prom” task on their own—except all it involves is copying the “How to organise a Christmas party” task and changing “Christmas party” to “prom” in each task (and the odd logo from Santa to a set of pupils). Who asks questions about this dubious practice—no one!

3. School A does Unit 2 like an exam. 25 hours. Work on own. No talking. No work taken home. A few A grades but mostly distributed across the grades and slightly lower than predicted ones. School B is more relaxed. Unit 2 is not done like an exam. Pupils can talk, discuss what they’ve done, use the Internet but all work is done in front of a teacher. Grades in line with predicted grades or slightly better. School C is sure that it is okay to let pupils do what they want and they can take work home and finish it off, and can take work home and do it as well if they like. The teacher (of course) will sign it off as similar work to what the pupil normally produces so it is okay to do this. The Head is so happy. Lots of children have done better than predicted grades.

I continue to be shocked that all it would take is for one Ofqual inspector to spend a couple of days popping into a dozen schools and seeing for themselves what is going on, looking at a few pupils’ folders, talking to a few pupils and asking a question or two of teachers. If just one person did this, they would know what a mess the controlled assessments have become in two days time, and could take action. Exam boards acknowledge this is what is happening at the teacher training days but do nothing to warn schools away from it.

I really hope that someone starts looking at this now. Perhaps you might ask AQA's exam chief (and the others) why they are happy to let schools cheat like this.

*December 2011*

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#### **Written evidence submitted by Richard J Nixon**

I have been advised that you are the chairman of the Parliamentary Educational Select Committee and you are holding a hearing with the exam boards on Thursday 15 December 2011.

Back in the summer I contact my MP Henry Smith and OFQUAL about my concerns about the examiner standardisation process that the various exam boards hold to prepare examiners/moderators for marking exam papers and/or moderating assessed coursework. I moderate GCSE additional applied science coursework for AQA and mark GCSE and A Level chemistry exam papers for Edexcel.

Each May, to prepare for moderating GCSE additional applied science coursework for AQA, I take a day of work from my school to attend a standardisation meeting in Central London hotel where I meet my team leader and officers from the AQA science department. Contrast that with what Edexcel do to prepare me for marking online GCSE and A Level exam papers:

June 2010—took day off school to complete standardisation of GCSE citizenship papers (marked this paper due to my experience as a borough councillor @ Reigate & Banstead BC from 2006 to 2010). The standardisation process was conducted using online chat room with me speaking and listening to my team leader using my PC and headphones. I never got to meet the team leader in person or see a photo of her to put a face to name/voice.

June 2011—did not need to take day off work to complete standardisation for AS Chemistry as it all took place online in the evenings with me having to complete a set of 10 practice papers and then set 10 qualification papers. If I had any queries regarding questions on the screens in front of me I had to phone my team leader. I never got to meet the teamleader in person or see a photo of him to put a face to name/voice.

November 2011—went to standardisation meeting in Central London hotel on Saturday morning for new syllabus for the GCSE science exams. I meet my team leader and officers from the Edexcel science department.

I raised the matter of the different standardisation processes with OFQUAL in June 2011. They looked into the matter and decided that it was up to Edexcel to decide what was the best form of standardisation to prepare the examiners for marking online exam papers. Having done all three types available to examiners in the last 18 months the former two (chatroom/online and online only) saves Edexcel lots of money in teacher release fees, travel costs and hotel bookings but not sure that it is the best way to prepare examiners for marking papers.

*November 2011*

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#### **Written evidence submitted by Dan Bottom**

##### **INTRODUCTION**

In terms of the accuracy of the marking of English, it is at best, fairly poor (a reflection of who the exam boards allow to mark, the incredibly short turnaround to mark scripts during term time and the ridiculous decision to allow online marking of English papers—how anyone can be expected to determine a candidate's ability by seeing only what is on the few inches of screen in front of their noses is beyond me...). Since 2010 the new specifications in English language and literature have marked a slightly more logical progression from GCSE to A Level Literature, with the same assessment objectives being used. GCSE English language still has very little to do with linguistics, yet paradoxically is the measure for A\*—C, despite Oxbridge and other top universities requiring A Level literature, not language, to gain access to the study of English at a higher level. The examinations, especially Unit 1 for GCSE English/English language is very, very formulaic which will help raise levels of mediocrity (ie squeezing C grades out of D grade candidates) whilst stifling the most able students. Also, every school leadership team, head of department, teacher (and often students and their parents too) know that some exam boards give students an easier ride than others...this is all that the exam board market place has created; unfair, skewed results where one student's grade is less equal than another.

Finally, bullet point three gets to heart of the problem posed by a plethora of awarding bodies; they compete for business in a market place where success is determined by student outcomes. Inevitably, schools will migrate to the exam board where students secure the highest grade. A very clear example of this came under the legacy specification in English, where AQA assessed poetry in an examination and WJEC allowed it to be assessed via coursework. Naturally, schools took the path of least resistance and lumped their students through poetry coursework to the detriment of their understanding of poetry itself. As for examination fees, these are an inevitable part of the current system, but the fee for remarks seems terribly high for what seems to be a furtive, opaque system that has no proper scrutiny whatsoever. Textbooks produced by the exam boards and publishing houses are extremely expensive, dull and, by their very nature, reduce English to a mosaic of

excerpts and fragmented texts. It is bad enough that examinations, *AFL* and the OfSTED inspection culture have almost wiped away the simple act of reading a novel or play from end to end over a number of lessons, without paying for text books that do this too.

1. *To what extent is the learning potential of very able students limited by the current crop of examinations, OfSTED and AfL?*

1.1 An apology to begin with: “intelligence” in whatever guise does exist, therefore its antithesis must also exist, but our language struggles to cope with this in a courteous way. The antonym for intelligence is often given as “stupidity”; however we all know tales of the stupid academic who can explore the universe without being able to tie their laces. Conversely, Shakespeare’s most insightful characters often were the “fools”. Notwithstanding the linguistic asymmetry inherent in any study of intelligence, or the vogue for classifying multiple intelligences, for the purposes of this paper, by “intelligent” I refer to students who have the potential, or demonstrate the ability, to explore the upper echelons of the academic study of English literature or language. What exactly constitutes the “academic study of English” will be guided by, but not limited to, the vagaries of the curriculum as imposed on education by the National Curriculum and its (often illogical) interpretation by exam boards who determine, through their specifications and assessments, what students are required to demonstrate in order to achieve success.

2. *What is AfL?*

2.1 A strategy that encourages the “learning” of students to be measured continually so that a clear progression in their learning can be achieved; once, and only once, they have demonstrated a secure grasp of a given concept, skill, or factual detail do they move forward to the next stage. To achieve these steps, students are provided with the criteria against which their learning will be measured. Successful examples of, say, essays are given in advance so that students can understand exactly what it is that they will be expected to do themselves. Past papers and questions that mimic likely tasks will be practised often, with the students’ responses measured, either by the teacher, peers, or themselves, against success criteria. Sounds very sensible and it *is* very seductive.

But, and there must always be a but, does it encourage independence, creativity and flair, the demonstration of which must be the determiner for success at the highest academic level?

2.2 A very bright student is told that they will be given an exam question such as: what effect do the headline, sub heading and images in the extract (a newspaper article on charitable work in a drought torn African community) have? The AfL approach to preparation for such a question would advocate sharing and analysing the mark scheme, applying this to model answers by trying to determine how many marks it would have received, then explicitly identifying the successful features of said response, before attempting their own response and seeing how that fared against the mark scheme. All very logical...

2.3 Now, what would a supremely intelligent individual make of this? Maybe, the constraints being placed upon them ought to be explored. Firstly, the question itself necessarily requires the effect of the language and the images on a hypothetical reader (for a very honest appraisal of the effect on themselves would, such as saying the article is, in their opinion, very limited, would attract limited marks) to be explored. The question does not allow for an exploration of how these facets of the article work; simply require a stab at how they might be perceived by an imagined audience. When preparing classes of mixed abilities for such tasks, it is a continual battle to get the brightest students to limit themselves to the terms of the question; a desire to explore the intricacies of linguistics and graphology is lost and the teacher is forced to say, “it’s a simple question, so you must pretend to be as simple as the task.”

2.4 Next, the mark scheme. Notwithstanding the limitations inherent in the question, giving the mark scheme in advance sets the parameters of inquiry; demonstrating X in a response attracts top marks, therefore seek only that which would do so and look no further than this. Superficial observation, or rather less deep exploration of the text, is the natural outcome. In terms of stretching themselves and seeking ever deeper levels of meaning, the bright student’s terms of discovery have been curtailed, rather like an archaeologist uncovering a pharaoh’s tomb, but being told that the only significant artifact they found is a wooden spoon. Initially the archaeologist might be intrigued by the ornate gold and bejeweled bones but if success is only to be found in a spoon...and after a diet of years of such narrowly focused “discovery”, wouldn’t the explorer become blindfolded to the possibilities?

2.5 For a period of time leading up examinations, the types of questions likely to be encountered clearly need to be explored and prepared for, but what affect such an approach in the preceding months and years? To be able to learn about the subtleties and complexities of language takes years of immersion and organic exploration. Yes, a teacher themselves must know what lies beneath a text, its context, the history of its form and effect on the audience, but it is the student who must encounter and overcome the challenges. The teacher should hope that the pupils leave curious and on the lookout for further examples, rather than happy that a learning objective has been met and students’ learning of a particular feature of English ticked off from a list.

### 3. *Targets to improve and the observation paradox*

3.1 An enduring side effect of the observation cycle is the attempt to turn concepts and skills into explicitly taught and learned targets. At the end of a piece of, say, creative writing, it would be no surprise to see a rather bland comment praising the student's effort, followed by a target for improvement, such as: When you redraft this, use prepositions, adverbs and present participles to open sentences to make them more exciting.

For the observer, there is clear evidence that the student knows how to improve and, assuming they do so, they rewrite said piece and act on the target, then they must have been learning, surely? Maybe, but then again, what exactly have they learnt in this process? To copy out most of what they had done before with a few tweaks that the teacher has insisted upon? Yes. But what else? What about the other methods that they did, or did not use? What about the effectiveness of their punctuation? Their lexical choices and use of analogy? Syntactical complexity? Intertextuality? Deployment of intriguing narration? Nothing mentioned, therefore it is implicitly correct. A target meant to improve, often has the effect of telling a student to do something very obvious to the detriment of the myriad techniques that a good writer could employ.

3.2 So, are targets useless? No, but they have a place that would, I suggest best be used in very tight exam practice units. They also give an observer something "positive" to observe and quantify and the teacher something easy to focus on when marking. But what would the alternative be? If time were not such a luxury, sitting with a particularly clever student and discussing what was good and bad, exploring how to improve and guiding them to successful writing and requiring them to read it and seek to learn from it, would be a powerful approach. Asking how their work differs from a superb example would encourage independence and expose them to excellence, thereby broadening their experience.

### 4. *The discursive essay*

4.1 Instead of giving students the aforementioned task (that will, I know, appear in all of AQA's Unit 1 English/English Language examinations) how about: Headlines, subheadings and images are the first wave of a journalist's lies. Discuss with reference to the article in front of you. For many students, such a task will never darken their door because it will never appear on an exam paper. But pause for a second and consider what the student must do to be even vaguely successful. Explore the function and effect of a headline etc, the use of language and graphology, reference to a text and exploration of alternative ideas. Far more intricate, whilst still touching on the central tenets of the likely exam question. Far more interesting, this approach also encourages independence and allows the teacher to also measure, however subjectively, the thought processes and expression of the student. Without a mark scheme and the limitations they impose, the pupil has a vast canvas on which to articulate their thoughts and discover their own academic voice.

### 5. *Lectures v multiple fragments*

5.1 There, in front of an interactive whiteboard, stands the teacher, confronted by a crowd into which must be poured a veritable ocean of knowledge, for without knowledge, what use is a skill designed to convey learning? So, the teacher embarks on some multi sensory tasks that require a riot of cutting and pasting, the colour coding of the sonnet's evolution, a hot-seating that sees Petrarch and Shakespeare discuss the different form of their sonnets and a frenetic plenary involving traffic lights and then it's done...they're gone and the sonnet's history is now consigned to history's dustbin. And in other classrooms, the same pantomime is repeated. Why? Why not get the classes together, sitting silently, making notes in whichever style best suits them? Give them the facts, make them try and learn them however they can, then test their retention. Oddly, some will do better than others. And in the multi sensory pantomime, with its attendant perspiration, resourcing and planning, some will do better than others. And the difference means what for the intelligent student?

5.2 In the first scenario, a huge amount of effort is expended to impart what is essentially, a chunk of history. The teacher focused on the activities. In the second approach, the teacher at least has the time to prepare by focusing on their own subject knowledge, something that is rarely given passing thought: is the educator sufficiently learned, or sufficiently motivated to learn what they don't know in enough depth? Many teachers of very bright students will have an IQ significantly lower than those that they teach—all they have is the illusion of knowledge caused by its absence in their audience. Whether or not this is the case, the teacher needs to continually focus on developing their own subject knowledge, but when the teaching delivery du jour requires fast paced, multi-sensory learning episodes surrounded by a plethora of assessment, marking and superficial target setting, what time is there for subject knowledge? In fact, it would be interesting to ascertain the proportion of state school teachers whose subject knowledge has grown since they began to teach. It would be no surprise to find that a teacher's degree marked the apex of their learning and teaching has led to a slow diminution ever since (though of course, their understanding of pedagogical indoctrination is reaching its apex after a few years in the classroom). Why is it a classroom? Ought not it be the teachroom, or learnroom?

### 6. *Finland and reading*

6.1 Stretch and challenge being a consequence of growing older: university is more of a stretch than A Levels; they in turn were more of a challenge than GCSE etc...so the early "dip" years ought not be a watered down soup of later challenges (that in themselves are limited by the very assessments that define them) but an

intensive fury of knowledge acquisition, skill practice and that most neglected of all areas of English, wide ranging reading.

6.2 How is it, that the *AfL* culture has led teachers in state schools to be unable to find the time to read more than a book a year (if that!)? Exams play their part: extract “analysis” is king, with the wider conceptual power of whole texts limited, where it remains, to a hectic race against the clock. Controlled assessments do allow for some limited reading, though most centres will, because they can, do the bare minimum within the rubric to get the highest mark. Thus the requirement that at least fifteen poems constitute a collection, whilst only two need referring to in an assignment, means, yes, you guessed it, that two poems in the new fifteen! Of course Shakespeare is still there, but a good film version and a well chosen extract, serves to create the illusion that a whole play has been read.

But exams and controlled assessment (and coursework before that) are not the only culprits in reading’s demise. School leaders will mention budgets and students themselves might mention the boredom of the written word, but for teachers, it is the fear of an observer seeing a class simply reading, or being read to, without overt “teaching” of some skill or other and the attendant assessment, that really has killed reading. If it takes, say, twenty lessons solid to read a novel, so one month of a school year, can this be justified? Can they be learning anything? Won’t some simply day dream for a month? Or worse still, fidget and misbehave? The answer to all of these, is “yes”. But the cynical amongst you might well ask, what happens in English lessons anyway? And the optimist might point to those wider cultural conversations and understanding a child can access in later life through reading about the world within which they live. English being taught through fragments of text is not English at all.

### 7. *VAKuous oppression of the silent thinker*

7.1 Most students in most comprehensives will have at least one brush with a somewhat misapplied, bastardised version of a neuro-linguistic programming (NLP) idea. It is often posited that we all apprehend the world in our unique way: some prefer to process things audibly, others visually and some in a more physical, active manner. The ubiquitous TLA (three letter acronym) VLK has crept from the pages of some credible research into schools. Hundreds of thousands of students have filled in simplistic questionnaires that have “determined” their learning style: visual, auditory, or kinaesthetic. Pupils often are able to say that they learn best though listening to music and audiobooks, where others prefer, and indeed demand, the more physical processes of cutting and pasting, or moving around the class room. Teachers, aware of the “science” behind said labels, strive to invent multi-sensory, VAK activities that meet the “needs” of their group, thereby personalising the learning experience for each student. All very noble, but the science upon which this process has been based has been somewhat twisted and hacked to meet the reality within which it has been applied to: adults do indeed have a preference for the manner in which they interpret the world, and more pertinently, receive and impart information. Some would listen to an audiobook over turning the pages of a novel whilst others doodle as they think and others find that exercise allows them to think. But these are adults and their preferred style has changed over the course of their life. Think for a moment what the VAK labels does to a child...I have a label, say visual, therefore I am a visual learner. Teacher, if I am not given visual stimuli or the chance to express myself through colour, drawing etc, my ability to achieve is being curtailed. Rather blinkered thinking. Children do indeed, just like adults, prefer to learn in certain ways, but they are there to learn how to learn as well. A wider diet of different activities will widen their ability to learn life, though it must be said, in the worlds of higher academic study and work, you generally have to adapt to the realities of that world, rather than demand it changes to suit your preferences.

7.2 On top of all the questions about VAK, another ought to be asked. In the NLP research, a fourth learning preference was clearly evident, that of the quiet thinker, sometimes labelled as being an audio-digital preference. Many of the most able students would fit into this category from their earliest years and retain its traits for life: quiet, deep thought that can be mistaken for day dreaming and a lack of engagement. The student who appears reluctant to answer a question as they postulate their response often gets cut off by a teacher unwilling to wait for the reply. The student feels their voice diminish and, over time, often sinks further into the shadows. The teacher, taking the line of least resistance, leaves them to it because their written answers, though often brief, are rarely wrong. So a cycle of silenced intelligence deepens and then bright, silent student coasts their way through a school system that is happy to make no demands of the undemanding child. Yet it is here, in the student that the VAK advocates refuse to acknowledge, teachers often ignore and schools send on their way without attention, that the deepest intelligence often resides. Once at university and the more didactic delivery and independent work, this same student flourishes, though they often are condemned to a university of a lesser academic stature than they might have entered had their needs been identified and met whilst at school. And what are these needs? Open ended, challenging tasks that demand enquiry and exploration of alternative interpretations. Not fragments of texts sandwiched between a barrage of assessments that prove only that assessment is happening.

### 8. *Conclusion*

8.1 Maybe the question is wrong. To what extent is the learning potential of very able students limited by the current crop of examinations, OfSTED and *AfL*, really ought be: education now dulls the brightest of minds. Discuss.

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## 9. Recommendations

- For what it's worth, replace all exam boards with university led, centralised one.
- Schedule examinations so that they marking, mostly done by teachers, is in the holidays.
- Make all examiners achieve an A\* in their respective subject—if they cannot do this, how can they assess this?
- Get rid of on-screen marking for English examinations.
- Introduce discursive essays into examinations that can be on any topic.

January 2012

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### Written evidence submitted by Dr Ian White

*Subject:* Clear evidence of falling standards and how to get more evidence (plus what I was told on an OCR exam course).

Dear Sirs

I would like to forward you some evidence regarding the recent exam controversies.

I attended a exam feedback session run by OCR for their A-level Physics course and was astounded to discover the following things that should be of interest to you. I have also attached clear evidence of falling standards over the past few years and explained how you can find further evidence that the constant rise in exam Grades are not down to better performance in exams (point 5). I am a Physics teacher in a state school.

1. Exam writing and marking is a part time job. Exams are written by teachers who write the exams in their spare time. This means that once an examiner has written an Exam **THEY ARE ALLOWED TO GO BACK TO THEIR SCHOOLS AND BEGIN PREPARING STUDENTS FOR THEIR OWN EXAMS.**

2. A further consequence of the part time nature of exam writing is the complete lack of quality assurance that goes on before an exam is issued. Quality assurance appears to be Limited to a couple of meetings between examiners where they look at each other's papers and comment on them. Worryingly it appears that no-one ever actually attempts the exam in the time allowed before the exam is issued. For OCR Physics this has had several consequences:

- When the new specification was issued three years ago it was nearly impossible for students to actually finish the exam in the allotted time period. Rather than making the exam a test of physics skills this made it a race. Furthermore it massively disadvantaged students who have English as a second language.
- Furthermore it means that questions with ambiguous wording only come to light after the exam has been sat. This means that many questions become worthless as a means of assessing students because questions do not make it clear what the candidates are required to do to get the marks. I would have expected that all papers would be sat by about 30 independent people before the exam was released so that questions could be checked for possible misinterpretations of wording. During the meeting I attended there were numerous examples of this which the examiners responded to with "yes, I suppose that wasn't very clear."

In short exams are very badly written. This also explains the spate of exam mistakes this summer.

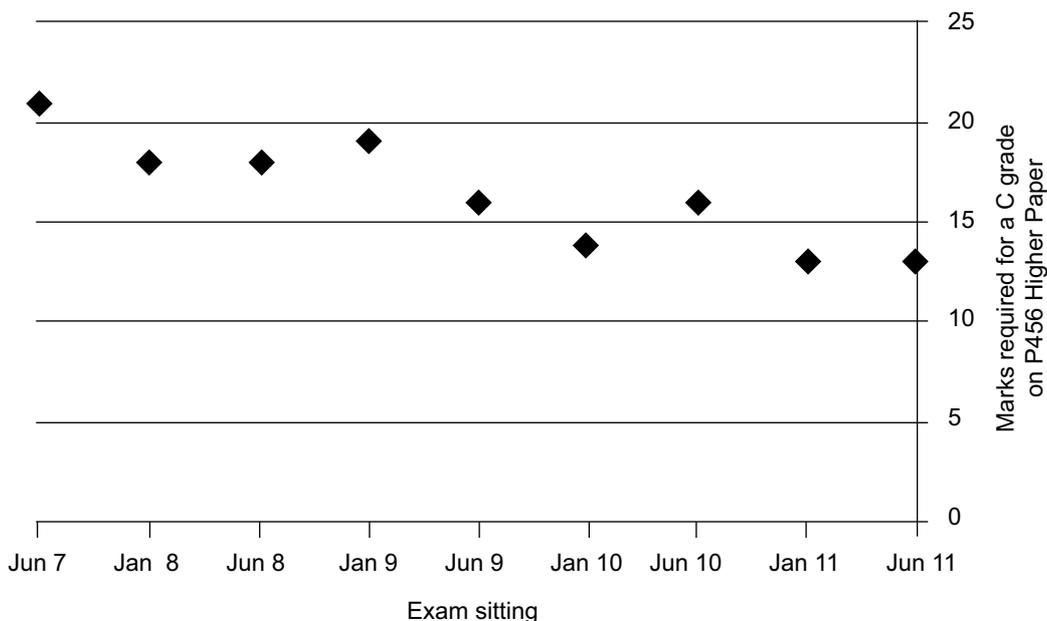
3. On the course we were told that there are certain questions which require certain responses (where actually there are several reasonable and physically correct responses). When I asked how candidates were supposed to know the exact response that a question requires I was told "you came on the course—so now you can tell your students". When you talk in your Telegraph article about the scandal of teachers being told the exact wording that students should use in their answers the real Scandal is that only certain wording will gain the marks when answers that show real understanding of a subject go unaccredited just because they do not exactly match the mark scheme, this means that you have no option but to teach to the test rather than provide proper learning.

4. A exam marker on the course boasted that when marking exams he can mark a 60 mark paper in four minutes (they are paid per exam marked—not something that promotes accurate marking). In physics exams there is a concept called error carried forward. This is supposed to mean that if a candidate makes a mistake on an earlier part of a question that affects their answers to later parts then their marks for the later parts should not be affected if they have completed the latter parts correctly.

This often involves some careful checking of the student's maths. I would consider it very difficult to take into account error carried forward and mark a paper in four minutes.

5. Grade boundaries are set only after all the candidates' marks have been collected in. This makes a complete mockery of the constant improvement in exam grades as exam boards decide exactly how many students get each grade ensuring that standards appear to rise every year. Grade boundaries are now so low that 30% is enough to get a candidate a C grade in some GCSE Science exams.

Here is an example of grade creep in the OCR 21st Century Science P456 paper (unit 332/2). The graph shows the number of marks (out of 42) required to get a C grade in the paper over the past four years in each exam sitting. You can see a clear downwards trend (you can even extrapolate and show that by 2015 zero marks will get you a C grade!).



The information on grade boundaries is freely available. Analysis of all science papers shows the same downwards trend. For OCR here are the links

June 2011 grade boundaries:

[http://www.ocr.org.uk/download/admin/ocr\\_60649\\_admin\\_unit\\_level\\_raw\\_mark\\_grade\\_boundaries0611.pdf](http://www.ocr.org.uk/download/admin/ocr_60649_admin_unit_level_raw_mark_grade_boundaries0611.pdf)

January 2011 grade boundaries:

[http://www.ocr.org.uk/download/admin/ocr\\_56047\\_admin\\_unit\\_level\\_raw\\_mark.pdf](http://www.ocr.org.uk/download/admin/ocr_56047_admin_unit_level_raw_mark.pdf)

June 2010 grade boundaries:

[http://www.ocr.org.uk/download/admin/ocr\\_47951\\_admin\\_mk\\_grd\\_bound\\_jun\\_10.pdf](http://www.ocr.org.uk/download/admin/ocr_47951_admin_mk_grd_bound_jun_10.pdf)

For boundaries prior to June 2010 you need to go to the specific mark schemes provided on the OCR website. The link for the 21st century science Physics course is:

[http://www.ocr.org.uk/qualifications/type/gcse\\_2006/tfcss/physics\\_a/documents/index.aspx](http://www.ocr.org.uk/qualifications/type/gcse_2006/tfcss/physics_a/documents/index.aspx)

The issue of plummeting grade boundaries has severe issues because when grade boundaries are so low it means there are only a few marks between grades. For example on the June 2011 paper of P456 exam a C was 13/42 and a D was 10/42. This means only three marks out of 42 separates a whole grade. This is one question and means that missing one question out can affect a student's result by a whole grade.

Low grade boundaries are a result of a conflict between Ofqual insisting exam boards set very challenging exams "to maintain standards" and exam boards needing a large majority of students to pass the exam so they can maintain market share.

If I can be any assistance in your research into the total ineptness of exam boards then please free to contact me.

January 2012

### Written evidence submitted by Dr Roger Taylor

The views expressed below are entirely my own and not necessarily endorsed by my current or past employer.

As a former teacher of mathematics and a current PGCE tutor I watched, on the Parliamentary channel, some of the recent questioning of Exam Board Heads on Exam Standards. There are additional questions you need to ask and additional information you require in order to see the magnitude of the reduction in Standards at GCSE level. When I was Head of Mathematics in a comprehensive school in Suffolk, we waited with baited breath during the 1990's to see how much lower the pass mark for a Grade C in mathematics would be each year. From 1988 to 2001 I seem to remember the pass mark for a grade C on the "Higher" paper dropped from about 45% to a little less than 20%. Meanwhile the educational establishment was crowing about rising standards! We all know that standards have fallen!

At "A" level, in Mathematics, I estimate that many achieving a grade "A" today would have been awarded a grade "C" 20 years ago. Many who pass today would have failed miserably 20 years ago. The Committee should ask for copies of the Examiners Reports and the Grade Boundaries for all core subjects since the inception of the GCSE. Whilst there may not be too much of a reduction in the standard required for the top grades, the standard for a grade C has slipped appallingly.

January 2012

### Written evidence submitted by Rodger Williams

The help given to students during the production of coursework that was outside the Joint Council Qualification's guidelines is well commented on and was one of the reasons behind the introduction of controlled assessments.

The JCQ's GCSE and Functional Skills specifications, and Principal Learning units within Diploma Qualifications, Instructions for conducting controlled assessments, 1 September 2011 to 31 August 2012 states that:

"4.5.2 When marking the work, teachers/assessors must not give credit in regard to any additional assistance given to candidates beyond that which is described in the specification and must give details of any additional assistance on the appropriate record form(s). Examples would include:

- having reviewed the candidate's work giving (either to individual candidates or to groups) detailed advice and suggestions as to how the work may be improved in order to meet the assessment criteria;
- giving detailed indications of errors or omissions which leave the candidate no opportunity for individual initiative;
- giving advice on specific improvements needed to meet the criteria;
- providing writing frames specific to the task (eg outlines, paragraph headings or section headings); and
- intervening personally to improve the presentation or content of the work.

Before giving additional assistance beyond that which is described in the specification, teachers should ensure that there is provision to record this assistance and take account of it in the marking".

However in guidance to centres the examination boards advice is still unclear. In terms of the feedback to students AQA Controlled Assessment guidance states "You should not, however: provide detailed/specific advice on how to improve drafts; give detailed feedback on errors/omissions; provide model answers or writing frames" and OCR GCSE in English guide to controlled assessment states "Teacher Feedback—Teachers may give feedback during the planning phase. They can also review planning and preparation and provide advice at a general level. This can be done to evaluate progress and propose broad approaches for improvement. It is not recommended that further teaching takes place in between sessions of the final assessment. However, teachers should not: provide specific advice on how to improve drafts; give detailed feedback on errors or omissions; provide model answers or writing frames to be used during the final assessment".

On the candidate record form the students are asked to "I have read and understood the Information for candidates (GCSE, Functional Skills and Principal Learning: Controlled Assessments). I have produced the attached work without assistance other than that which is acceptable under the scheme of assessment".

If a student has only received guidance from their teacher, then student would correctly sign the form, as they would have only acted under the guidance of their teacher.

On the same candidate record form the teacher is required to confirm that "1. the candidate's work was conducted under the conditions laid out by the specification; 2. I have authenticated the candidate's work and am satisfied that to the best of my knowledge the work produced is solely that of the candidate".

If a teacher interprets "should not" as something that could be allowed, then they teacher would to correctly sign the form, as they would have only followed the guidance of the examination boards.

This guidance is clearly open to interpretation and abuse by examination centres and so does not curb cheating in controlled assessments they were introduced to prevent. Further from OFQUAL's report on controlled assessments, it is known that exam centres are experiencing difficulties in implementing controlled assessments <http://www.ofqual.gov.uk/downloads/category/136-other-research?download=1164%3Aevaluation-of-the-introduction-of-controlled-assessment>. The issues surround controlled assessments are also openly discussed in teaching, parent and student forums:

<http://community.tes.co.uk/forums/p/453381/6240463.aspx>  
<http://community.tes.co.uk/forums/p/474368/6620342.aspx>  
<http://community.tes.co.uk/forums/p/445516/6095444.aspx>  
<http://community.tes.co.uk/forums/t/287309.aspx?PageIndex=1>  
<http://community.tes.co.uk/forums/p/530949/7093085.aspx>  
<http://community.tes.co.uk/forums/t/536237.aspx?PageIndex=1>  
<http://www.mumsnet.com/Talk/secondary/1067707-controlled-assessments/AllOnOnePage>

I contacted AQA regarding their guidelines this was their reply:

Response (Alexander Dixon)—27/10/2011 10.58 AM

Dear Mr Williams,

Thank you for your e-mail,

The phrase "should not" indicates very clearly that an action should not be done. For example, if you told a child they "should not do something" you would not expect them to interpret that as "you can do something".

The statement "should not be providing detailed/specific advice on how to improve drafts; give detailed feedback on errors/omissions; provide model answers or writing frames" is open to interpretation on both professional and moral grounds. Please contact JCQ on 020 7638 4132 if you require a more detailed explanation. Alternatively you can visit JCQ's web-site at [www.jcq.org](http://www.jcq.org) or e-mail at [info@jqc.org.uk](mailto:info@jqc.org.uk)

Kind regards,

Exam Office Support.

*How can guidelines be "open to interpretation on both professional and moral grounds"?*

I have contacted the JCQ and there reply was:

Dear Mr Williams

Thank you for your e-mail message. I shall retain your e-mail message on file and when I meet with the awarding bodies to review the JCQ publication Instructions for conducting controlled assessments for the academic year 2012/2013, I will ensure that your concerns are brought to their attention.

Yours sincerely

Nick Lait  
Examinations and Committee Manager  
JCQ

Considering the examinations are to be candidates are to be certified in 2012 and any issues in assessments should have been resolved, I contacted the Secretary of State for Education, and this was the reply:

Dear Mr Williams

Thank you for your email of 7 November, addressed to the Secretary of State for Education, about controlled assessment guidance. I hope you are able to appreciate the Secretary of State receives a vast amount of correspondence and is unable to reply to each one personally. It is for this reason I have been asked to reply.

Grievances about JCQ and AQA's guidance for marking GCSE and Functional Skills should be directed to the awarding body, which I understand you have already done in respect of AQA. The Government require awarding organisations to handle complaints relating to the qualifications they offer. You may also contact JCQ as AQA suggest in their reply, but if you are still unhappy with AQA and JCQ's clarification you may contact Ofqual the exams regulator. Ofqual will only intervene if the awarding body have failed in their responsibility for handling issues effectively. Ministers cannot intervene in the responsibilities and decisions of the awarding bodies.

Thank you for writing to the Department with your concerns and I wish you every success for the future.

Yours sincerely

Sarah Thompson  
Public Communications Unit

I am appalled that students are likely to miss their potential grades because some schools are not clear about the guidelines and other schools will take a “legal” definition of the guidelines, ie, we can because it does not explicitly state we can’t, and those responsible for exam regulations are not willing to accept responsibility for this.

Given the reaction by Mr Gove and the DoE to the report by The Daily Telegraph on exam standards, even though the DoE had already stated that ministers could not intervene in the responsibilities and decisions of the awarding bodies, I contacted both AQA and OFQUAL and below are their responses:

Response (Paula Hayes)—09/12/2011 11.39 AM

Dear Mr Williams

Thank you for your enquiry

AQA are regulated by OFQUAL (Office of the Qualifications and Examinations Regulator) and JCQ (Joint Council for Qualifications) we have to follow their rules and polices in regards of control assessments. Please find their address below:

OFQUAL  
Spring Place,  
Coventry Business Park,  
Herald Avenue,  
Coventry  
CV5 6UB  
phone: 0300 303 3344  
web: [www.ofqual.gov.uk](http://www.ofqual.gov.uk)

JCQ  
Joint Council for Qualifications  
Veritas House  
29 Great Peter Street  
London  
SW1P 3LW  
phone: 020 7638 4132  
web: [www.jcq.org.uk](http://www.jcq.org.uk)

Kind regards  
Exams Office Support

Dear Rodger,

Thank you for your further contact with Ofqual.

Ofqual is responsible for regulating organisations who award registered qualifications in England, and registered vocational qualifications in Northern Ireland.

If the review you are referring to is in response to the allegations highlighted in the press recently, we are taking the allegations very seriously and will be seeking to review any evidence which could indicate that the qualification system is being brought into question. Awarding organisations are bound to follow Ofqual regulatory Codes and practices, these should be vigorously followed when administering qualifications.

Where instances may come to light which indicates the regulations have been breached, discovered outside of Ofqual's standard monitoring activities, there are a range of actions we are able to take to address them. This could be through an instruction to amend their practices along with enhanced monitoring activities of them to ensure they comply with the instruction. However in severe instances this could involve the removal of their awarding powers. Further information regarding the Telegraph report and our responses to it can be found via the link below:

**<http://www.ofqual.gov.uk/news-and-announcements/83/814>**

We are unable to review previous complaints unless new evidence is presented. We would not be directly responsible for checking the quality of the work or the methods conducted by schools in relation to controlled assessments. This would need to be conducted by the relevant awarding organisation directly in the first instance. We do not investigate allegations against schools or colleges, our regulations require the relevant awarding organisation to investigate any allegations of malpractice.

We know from the research we have done on controlled assessment, which included the English suite of subjects, that the Awarding Organisations are working to increase consistency of practice in terms of the guidance given to administer controlled assessments. If you are unhappy with the approach that an awarding organisation have taken I would advise discussing this further with them.

Kind regards,

Amelia Hopkins  
Customer Service & Complaints Officer, Ofqual

So given that:

- AQA, and other the exam boards, cannot guarantee that controlled assessments have been written under the same controlled conditions across exam centres.
- OFQUAL know from their research that Awarding Organisations are still working to increase the consistency of practice in terms of the guidance given to administer controlled assessments.
- The control conditions for conducting GCSE English controlled assessments are high, and virtually the same as the written examinations, so there should be no difficulty in ensuring exam centres follow the guidelines.
- Controlled assessments are not going prevent, as they are designed for, discrepancies in candidates written examination and controlled assessment marks (as was the case with coursework) and cheating.
- The inconsistency in controlled assessments, especially in English and ICT as it worth 60% of the marks awarded, is going to have a far greater impact on candidate's results than any inside information given by examiners on the written examinations.

*Why are the exam boards, JCQ, OFQUAL, DfE and the Minister for Education not willing to accept the ultimate responsibility for the administration of controlled assessments and prevent the tens of thousands of candidates that will be denied their potential grades and schools from receiving an unwarranted failing status?*

*January 2012*

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### **Written evidence submitted by Geoff Hurst of Altain Education**

1. I was until recently Director of Market Strategy with one of the leading three exam boards, AQA, and I am now the Managing Director of strategic educational consultancy, Altain Education.

Others will be better placed to comment on exam structure directly. However as the enquiry has progressed, new themes have emerged, late into and subsequent to the hearings, drawing in adjacent areas that are related to exams, about which we feel we have a helpful contribution to make.

2. These areas include

- (a) *Student Needs*; the needs of the student and other consumers and users of the outputs of the examination system; an aspect that we consider may be under represented.
- (b) *Exam Seminars*; the original subject of the Daily Telegraph reporting, and an area on which Ofqual has now decided.
- (c) *Endorsed Publications*; the relationship between examinations and published resources, including textbooks.
- (d) *Inclusive Subjects*; considering of the increasing role of digital resources and alternative options to ensure market mechanisms support the “long tail” of smaller subjects.
- (e) *Integrated Learning*; notably the pivotal role of A levels, where, in response to University concerns over the readiness of students for Higher Education, it has been suggested that Universities should play a more significant role in their design and content. We believe that this has a direct connection with issues at the heart of this inquiry, that have not fully surfaced or been addressed.

3. An area of overall concern is the possible entanglement and interdependency of these adjacent areas above, which can make a clear recommendation on Examinations more challenging to get right, or in one clean move, whilst managing down the risk of unintended consequences.

4. Whilst we have chosen not to contribute directly on the Exams Process we are clear that, of the options under consideration, we are aligned to the view that enduring change in education is best achieved without recourse to major structural change.

It also our belief that, given time and space, the Exam boards will enthusiastically take steps to address issues and, as importantly, be an enthusiastic contributor to the necessary future development of the education system, helping make it better for students, teachers and users of the outputs, Higher Education and employers.

5. We do however advocate a much clearer separation between Exams and Publishing than at present. In part this is because of the very important public confidence issues. However there are critical education output issues too, which we explain more fully below:

We also go on to illustrate how the required change can be achieved without “throwing the baby out with the bathwater” and why this need not involve wide scale structural change.

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EXAMINATIONS AND THEIR RELATIONSHIP WITH ADJACENT AREAS SUCH AS PUBLISHING—INSIGHTS AND PROPOSED SOLUTIONS

*Exam Board Seminars*

6. This is an important area of enquiry, in terms of public confidence, given that the national press team specifically featured meetings in their reporting of concerns.

Since the last inquiry hearing at which Glenys Stacey was present, Ofqual have communicated their decision<sup>87</sup> that Exam Board face to face teacher training seminars that relate directly to the delivery of a specific named qualification must not occur after 31 August 2013.

Also that Exam Boards should make any necessary information for the proper administration of qualifications accessible to all schools.

7. This aligns strongly with Altain Education’s own perspective. In our response to the Ofqual’s call for evidence we concluded our evidence with the following:

“Perhaps counter intuitively Altain Education strongly recommends that doing the opposite of what might be expected and moving rapidly to make current sessions widely available, but this case online, with transparent levels of access among practitioners. Guidelines for content should be agreed. Delivered content should either be video recordings of a live session or, preferably, programming and format developed specifically for online media.”

8. Clearly then we are supportive of this decision, but we consider that an “unregulated seminar industry” also holds risk for public perception, with the distinct possibility of irregular quality or availability, through, for example, individuals moving from regulated to unregulated. We suggest there needs to be encouraged, rapidly, a self-regulation model with the appropriate package of codes of conduct, trust marks and so on

*The relationship between publishing and examinations*

9. A key theme to emerge from the inquiry into the administration of examinations for 15–19 year olds is the relationship between exams and publishing.

For Altain, the pros and cons of the current system can be summed up as follows.

Pro the current system:

- (a) Students and teaching staff gain clarity on expectation in the exam in those centres where full access to aids is afforded.
- (b) Guidance for teachers on those resources that best fit with the specification.
- (c) Students benefit because of an individual teacher’s confidence that they are teaching on broadly the right lines.
- (d) Students having difficulty or those with greater potential to progress benefit because the individual teacher has greater flexibility to devote more specialist attention.
- (e) In places and at times when budgets are constrained (always) then gaining insight on where to invest resources for most effect will gain stakeholder support, locally.
- (f) Students being taught by a stand in teacher or one that is not a specialist in subject area can still remain on track with the curriculum.
- (g) The current formula and bundled publishing offers (prime titles sold with less popular) subsidises niche subjects that publishers would find uneconomic to produce unless bound in an endorsed portfolio deal.
- (h) Students and parents separately wishing to purchase revision materials can be guided on choice.

Contra the current system:

- (a) Education policy subsumed into Exam processes, hence claims of “the exam tail wagging the educational dog”.
- (b) Process is too narrowly focussed on optimising performance around the margin of “the D/C borderline” in GCSE.
- (c) Market forces have encouraged the concept of “single book solution” against a broader choice of resources to encourage a well-rounded education and longer term employability.
- (d) General discouragement of authors and publishers to innovate, because of dominance of “formula” approach.
- (e) The publishing and seminar “formula” does not work effectively and economically for all subjects.
- (f) Digital resources from sources other than Exam board and endorsed publisher are lacking guidance on fit with specification and examination.

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<sup>87</sup> <http://www.ofqual.gov.uk/news-and-announcements/130-news-and-announcements-press-releases/886-ofqual-announces-changes-to-teacher-seminars>

- (g) A critical and concluding “con” is that students are under prepared for longer term progression, particularly from A Level stage to Higher Education.

10. At Altain Education we have been carefully following trends and views of key opinion leaders as well analysing the Education select committee transcripts.

The balance of opinion appears to be that there is clearly detriment from a narrowing effect of too close an alignment of publishing and assessment activities in some cases. Therefore a change to this situation is being recommended.

However as important is a key message is also that there are benefits too, such as clarity of expectations for the exam and guidance on resources that cover the ground. Both of which are helpful to teachers and students and therefore benefits which should not be lost.

11. Altain Education’s view on this issue is that we can have both guidance and breadth in variety of resources and that the remedy doesn’t necessarily require a reshaping of the industry.

Given the current situation with concerns for public trust what is now required is clearly visible tangible action in this regard.

An Altain education proposal for an independent Education Content Trustmark (ECT) would allow to retention of many of the pros and mitigate the cons, while not creating wholesale upheaval. More information on this is available directly from us.

#### *The relationship between publishing and A Levels*

12. In agreeing that Universities should play a larger role in the development of A level qualification than they do now between Ofqual and the Department of Education have cited as a key reason the perception that students are under prepared on entering Higher Education.

A large scale qualitative research study published in April and commissioned by Ofqual explored the extent to which A levels currently prepare students for higher levels of study largely supports this concern over students being under prepared.

13. This point is pertinent, as we have suggested also that a critical con of the strong alignment of publishing to examinations, highlighted in the previous section, is that students are under prepared for longer term progression, particularly from A level stage to Higher Education.

In effect that the detriment of narrow teaching and resources is amplified at this level of study.

14. This suggests two courses of action:

- (a) Specific activity to evaluate the nature and scale of the detriment of aligned examinations and publishing at A level in particular, together with an evaluation of options to address the issue.
- (b) Assuming that the desired outcome is A level students that are better prepared for Higher Education then there may be benefit in identifying the wider set of factors contributing to this situation for universities input to also be sought. Specifically the nature of published resources and their application.

Building on these two points:

#### The nature and genesis of A level resources

15. Altain Education considers that the decision by AQA, for example, to endorse one publisher, Nelson Thornes, was not in sense a bad decision as it can be seen, from the published list of materials, to cater for a longer list of courses than might have been the case with unregulated market forces.

16. However, it was a turning point that we believe has indirectly led to industry wide adoption of a model of resources for A level that, in our opinion and those of other observers, not least Wellcome Trust,<sup>88</sup> tends towards a single book, “on size fits all” model akin to GCSE text books from which they may have been spawned. Thus falling short of providing the basis for a rounded education and effective preparation for Higher Education.

17. We do appreciate this assessment may be disputed however it is evident that pressures did exist with the potential to drive to this outcome.

The relationship began with collaboration on text books for GCSE science and Mathematics for first teaching in 2006.

This GCSE based model was highly successful for the publisher. As *The Daily Telegraph* reported in December 2011, “After AQA agreed a deal with Nelson Thornes in 2005, the publisher’s turnover jumped by £6 million”.

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<sup>88</sup> [http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy\\_communications/documents/web\\_document/wtvm054861.pdf](http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/wtvm054861.pdf)

This led to a five year exclusivity arrangement whereby “Nearly three quarters of AQA A level specs will have some form of NT publishing support” a position that was communicated in an announcement to schools in June 2006 titled “A Strategic Partnership”.

18. Once this formula became the mode for one leading exam board and publisher relationship there would have been pressure for the rest to follow, or in many cases decide not to publish, because of unregulated or short term market forces.

Beyond the test—a wider scope for University involvement

19. Clearly we are still awaiting confirmation of scope and nature of university contribution to the development of A levels. However, looking forward, we suggest that it is in the interests of both secondary education and universities themselves to consider a scope of intervention that goes beyond question paper and specification content.

20. As A level curriculum development is planned to proceed that of GCSE’s, developing the A level resources model in such a way as to be aligned with the need of Higher Education and employers gives us the opportunity to reverse the trend of the past, up skilling GCSE resources.

21. Building on this, a further hypothesis is that what has been created is in fact a downward spiral. That is increasing grade demands for the most popular university courses, particularly A\*, and increased tuition fees has led to teachers, students and parents to seek out the resources that map onto the specification exactly. This is possibly resulting in ever tighter exam board approvals criteria binding them to exams ever more tightly. Certainly making it less commercially attractive for publishers to deviate from the formula.

22. Most likely this points to an important symbiotic relationship between the different components of education and they are best considered together in order for there to be effective education outcomes, such as a student’s preparedness for higher education or employment. For example, is it seems to us that the following elements may all have a contribution to make and should be considered together:

- (a) Exam content and assessment methodology.
- (b) Guidance and support to the publishing model and support materials and services more generally.
- (c) Teachers professional development and performance criteria.
- (d) HE entrance criteria, which may need to become more transparent and less rigid.

23. The key lesson of the past is that Exam board decisions such as policies on publisher relationships and acquisitions have substantially wider consequences than perhaps anticipated and emphasise the need for inclusive consultation and an overseeing eye from someone such as Ofqual for decisions of this magnitude.

*The increasing role of digital resources and support for the “long tail” of smaller subjects*

24. As a general principle we would advocate choice and competition as beneficial in the sector.

However for the smaller volume subjects there are teachers who are delighted to see that a supplier is still publishing for their subject. That this is part of an enforced or endorsed bundle offering of major and minor titles is a secondary if larger concern.

25. Ensuring support for a broad range of subjects has been a key part of the justification for Exam board and publisher endorsement and approval, where preferred supplier status or exclusivity is offered in return for supporting smaller subjects.

26. Looking forward there are clear alternative models facilitated by the phenomena of digital and social media. This has the joint benefit of expanding choice for the most popular subjects and keeping a lifeline of study assistance for the smaller subject areas by means of low entry cost publishing and content.

27. Furthermore we believe that for the “long tail” of smaller subjects there is a strong case for facilitated collaboration between Exam boards and Publishers, where some current practices such as endorsements and unbridled competition, counter intuitively perhaps, actually inhibit development of support for smaller subjects.

*The needs of the student and other users and consumers of the outputs of the examination system*

28. The needs of students and users of the outputs of the examination system can often appear underrepresented in the debate when compared to the all-round effort to improve the qualification process itself.

More typically the business model for qualifications, in say a professional environment, has the consumer of the education or training—student, and users of the qualification—the employer, at the heart of its business and therefore deliberations.

29. For example Ofqual research around the subject of the exams and publishing relationships appears to be emphasising the views of the teacher. This is an important viewpoint, but one which potentially leads to a skewing of outcomes away from what approach is best for students.

Clearly in researching teachers, students' needs can be expected to be represented by proxy, as many teachers will be conscious that, in a sense, the students that they are teaching are on a journey from education, through to employment and beyond.

However in some situations, faced with immediate pressures on results and no short term accountability for student progression and subsequent employability, responses may be coloured as resources that represent more direct route to the best results will be a temptation too great.

30. Our suggestion therefore is that at all times, the perspectives of providers of education and assessment would benefit from a being balanced with a full and formal account of needs of the student from the perspective of their being consumers of education. Together with the needs of users, Higher Education and employment.

31. Finally, amongst the many positive aspects of the hearings and related research, for example by Ofqual, has been the consideration of the perspectives of a wide range of stakeholders. These do however appeared to have been considered in a homogeneous fashion—"Teachers", "Students", "Higher Education", "Employers" and so on.

In our experience it greatly benefits analysis in this sector, as most others, to also appreciate the segments or grouping of stakeholders with shared needs and other characteristics that sit beneath these higher level definitions.

For example segments representing the differing levels of teacher experience and confidence on the one hand, and the needs of students of different ability levels on the other.

These differences can have a significant impact on the nature of teaching and learning that best suit the situation as well as the appropriate nature of associated published resources

#### SUMMARY AND CONCLUSION

32. There is clearly an overlap that exists between the work of the Education Select Committee considering how examinations for 15–19 year olds in England be run and adjacent developments.

From reviewing transcription of the enquiry and related media activity we can observe challenging dilemmas for the enquiry as a whole, not least of which is an apparent entanglement of publishing and other adjacent areas with the core concern of this inquiry, examinations.

At the heart of the inquiry is a need to map a way forward for restoring and sustaining public trust in the education system of which examinations are a key part.

We hope that our contribution in the form of insights and suggestions helps this process.

33. If we had a broader point to make it would be that, examinations and Exam boards have perhaps unwittingly come to occupy too much of the centre stage. When in fact a good education and an effective education system require a symbiotic relationship between a numbers of elements of which assessments is just one.

Crucially it is the *relationship* between these things that needs to be nurtured and supported in the right way

34. We should take the advantage of the analysis from this inquiry, Ofqual's recent interventions and, together with the planned new approach to A level developments, to model and generate a new equilibrium that put student progression and preparedness, rather than exam results at its heart.

May 2012

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