

Glenys Stacey  
Chief Regulator  
Ofqual  
Spring Place  
Herald Avenue  
Coventry  
CV5 6UB

4 February 2015

Dear Glenys,

Thank you for the opportunity to comment on Ofqual's proposed changes to the way practical work in the sciences is assessed at GCSE. This letter sets out SCORE's view of the reform and important questions the SCORE committee hopes you will consider as you finalise details of how it will operate.

SCORE recognizes the significant drawbacks with the current system of assessing practical work at GCSE, and does not support the retention of the status quo. We are therefore supportive of the proposal to make changes, and some of the proposals are worth pursuing, but without more detail than is provided in the consultation document, it is difficult for us to comment in depth. However, we would like to draw your attention to the following concerns that we would like to see addressed.

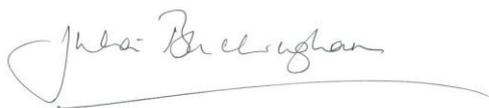
- 1) We are pleased that the reforms start from the premise that practical work is central to the sciences, and should form a significant part of students' learning experience. However, we do not feel that a sufficiently convincing argument has been made for the number of practical activities to be undertaken by students. If students are expected to demonstrate mastery in a set number of skills, then eight is likely to be too many. However, if schools must only record attendance and participation, then eight is too few.
- 2) Practical activities should be specified broadly enough to avoid a narrowing of student experiences and highly predictable examining, and to allow teachers to plan how best to engage their own students. The SCORE organisations would be happy to assist with this process.
- 3) Monitoring of these activities will be central to ensuring that schools continue to invest time and resources in practical science, but there is very little detail in the consultation document about how this will be carried out. We are pleased that teachers will have the freedom to decide what form of record keeping is most appropriate for their students to use as part of their learning, and that schools will need to provide written assurance that all their students have completed the practical activities before they take examinations. However, we would like to see more information about the level of scrutiny awarding organisations will use to ensure that these submissions are accurate.
- 4) The marks awarded for practical work should reflect its central place in the sciences, and act as a driver for its completion in schools. We would therefore advocate that, in principle, more than 15% of the total number of marks should be allocated to practical work. However, we have the following concerns about raising this percentage at this particular time:
  - a. While we agree that indirect methods of assessment may be valid, we have yet to see the evidence Ofqual employs to support their use in the GCSE sciences. This reflects a broader issue, namely the dearth of research evidence on the assessment of practical work for public examinations. We understand that the

Wellcome Trust, Nuffield Foundation and Gatsby Foundation are embarking on a research programme designed to investigate this issue, and we hope the findings will be taken into account in considering future reforms.

- b. Under the current proposals, it is not clear what content will be covered by this 15%. Specifically, whether it will include questions that assess, indirectly, the skills and knowledge about setting up and using apparatus that students have acquired by carrying out activities themselves in the classroom, or the content covered by the 'Working scientifically' section of the GCSE sciences criteria produced by the Department for Education. We would like clarification on this.
- 5) From the research SCORE carried out into the resourcing of practical work in schools, we know there is significant variation in the amount of funding allocated by schools to the acquisition and maintenance of resources for practical work in the sciences. This has a bearing on the current consultation for several reasons.
- a. It demonstrates that care will be needed in specifying set activities that require particular equipment (though we would not advocate a 'lowest common denominator' approach)
  - b. It shows that schools are likely to need strong incentives to continue supporting their science departments appropriately. This may require some kind of sanction if schools cannot demonstrate that their students have carried out hands-on practical work in the sciences, as required by the specifications.
- 6) We have serious concerns about the way in which this consultation has been carried out, for a number of reasons:
- a. An eight-week consultation over the Christmas period is insufficient for a reform of this significance. The SCORE organisations would have liked longer to consider the proposals and their implications.
  - b. There is very little detail in the consultation document about how the reforms will operate in practice, meaning that respondents must speculate. Members of the SCORE committee also attended events on 15 January to discuss the consultation, and were disappointed that little clarification was provided about the detailed nature of the proposals. SCORE, and others in the science education community, need to see examples of assessment and endorsement tools to be used before we can provide informed feedback.
  - c. Evidence has not been used effectively in demonstrating why the proposals would improve on the current situation. And some comments, including those by SCORE, have been used out of context, or not referenced appropriately.
  - d. Appendix 2 of the consultation gives mark distributions, so that the distributions for the current controlled assessments may be compared with those for the written papers. Many of the written papers have very low averages and nothing is proposed to deal with this problem. The evidence presented by Ofqual shows the principal problem is disparity between boards rather than teacher assessment per se. Ofqual should challenge the awarding organisations responsible, asking for explanations of their unsatisfactory results and requiring them to enhance the standard of their work.

The SCORE organisations would be happy to provide advice both on the range of activities and on draft assessment materials, if sufficient time can be allowed for us to do so. We would also be very happy to meet to discuss these concerns.

Yours sincerely



Professor Julia Buckingham  
SCORE Chair