

The Assessment of Practical Work in GCSE Science  
Ofqual  
Spring Place  
Herald Avenue  
Coventry  
CV5 6UB

TEL: +44 (0)20 7611 8888 Direct: 8285  
FAX: +44 (0)20 7611 8545 Direct: 8254  
E-MAIL: n.wilkinson@wellcome.ac.uk  
08/01/2015

Dear Glenys,

## **Assessment of Practical Work in GCSE Science**

We are writing in response to the Ofqual consultation on the assessment of practical work in GCSE science. We are deeply concerned by the proposal that practical skills will not be directly assessed, and the suggestion that such skills can be validly measured through questions in the written exam. We urge Ofqual to delay any changes until evidence becomes available from the modifications that are being made to the assessment of practical science at A level.

We responded with detailed comments to Ofqual's GCSE reform consultation in August 2013<sup>1,2</sup>. It is disheartening that we are now being consulted again as the evidence relating to the most appropriate method of assessing practical skills has not changed, nor has the research community's position about the crucial importance of practical work. Ofqual's proposals are being formulated in the absence of evidence on the effect they may have on the quality and quantity of practical science being carried out in schools, on the effectiveness of written questions in assessing practical skills, and on the potential impact on students' engagement in science learning.

The Gatsby Charitable Foundation, the Nuffield Foundation and the Wellcome Trust are working in partnership on a programme exploring how we can better enable all schools and colleges to engage their students with high quality science practical work. One project will look to identify better approaches to the assessment of practical skills in science GCSEs and A levels; another is a long-term monitoring programme to capture changes in the quality and quantity of practical science in a representative sample of 1000 schools and colleges, including those in Wales, Scotland, Northern Ireland and gaining annual feedback from at least 3000 members of staff. This research was initiated after the decision to remove practical assessment from science A level grades, which was met with serious concern from much of the science education community. We strongly recommend that Ofqual wait for this evidence to become available before proceeding with changes at GCSE.

---

<sup>1</sup> GCSE reform consultation, response from the Wellcome Trust.

[http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy\\_communications/documents/web\\_document/wtp055604.pdf](http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/wtp055604.pdf)

<sup>2</sup> GCSE reform consultation, response from the Gatsby Charitable Foundation

<http://www.gatsby.org.uk/~media/Files/Education/Ofqual%20GCSE%20Reform%20Response.ashx>

It is essential that practical work is a priority in all science qualifications to develop students' skills and knowledge, and foster deeper engagement with the subjects. Without direct assessment, practical science may be devalued by head teachers and senior leaders who are under pressure from school accountability measures and tight budgets. Given that nearly all students take science GCSEs, there is great potential for damage. There has been huge investment from government, industry and others to encourage the uptake of science, technology, engineering and mathematics. This risky proposal for GCSE science could seriously undermine these efforts.

Yours sincerely,

Josh Hillman  
Director of Education, Nuffield Foundation

Sir John Holman  
Professor of Chemistry, University of York

Hilary Leever  
Head of Education and Learning, Wellcome Trust

Nigel Thomas  
Executive Director of Education and Skills, Gatsby Charitable Foundation