



KJP/PAG

29 January 2015

Professor Julia Buckingham  
SCORE Chair  
Science Community Representing Education  
6-9 Carlton House Terrace  
London  
SW1Y 5AG

Dear Professor Buckingham

### **A-level science practicals trials**

I am writing further to your letter of 15 January 2015 on the A-level science practicals trials.

I included your letter as an appendix to the report I presented to Ofqual's General Qualifications Oversight Board on Friday, 23 January. Following a full discussion, it was agreed that I would respond on behalf of the awarding bodies collectively as Chair of the science practicals working group. I have addressed the points you raised in the order in which they are set out in your letter.

### **Documentation and record keeping**

We agree that it will be necessary for both teachers and learners to keep appropriate records. Records of attendance alone would not suffice. The awarding bodies are working to provide guidance on documentation and record keeping for both teachers and learners, and this guidance will be available by the summer of 2015.

### **Provision for learners who are absent or who require reasonable adjustments**

We are discussing with colleagues who have responsibility for administering our current procedures for absence and reasonable adjustments to ensure that both of these issues are appropriately addressed in relation to science practicals.

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## **A quality assurance framework**

We agree that the new approach to A-level science practical work will need to be underpinned by an effective quality assurance framework if it is to gain and retain the confidence of all users. The quality assurance framework we envisage will include the following features:

- A monitoring system that will allow awarding bodies to support teachers in ensuring they are assessing learners' attainments in practical work to the correct standard and are applying the Common Practical Assessment Criteria (CPAC) in a consistent way.
- A comprehensive support package for teachers which will provide advice, guidance, exemplars etc. on the use of the CPAC.

We are also investigating other approaches that could be used to further enhance the effectiveness of the monitoring and support framework, such as statistical analysis to identify anomalous patterns in outcomes between learners' performances in practicals and their corresponding performances in those questions on the written papers which focus on practical skills. We are also considering whether there are any other agencies that could reinforce with centres the central importance of practical work as an essential component of science A-levels and we know that Ofqual is also considering this point. Your thoughts on this would be much appreciated.

I would make one further point on this particular issue. The most effective means of ensuring that teachers construct courses that give opportunities for learners to engage in enriching practical activities, is for the science teachers themselves to appreciate the importance of such practical activity in providing a fully rounded science education. I think the enthusiasm with which teachers involved in the trials identified ways in which the new approach could enhance opportunities for learners to engage in enriching practical work is encouraging in this regard. The film we made of the 16th December event demonstrates this. I attach a link to the film within this email. It may well be that this would be another area in which support from SCORE could be extremely helpful and I would welcome your suggestions on this point.

## **Monitoring visits**

Awarding body staff, working with our technical experts on the JCQ Standards and Technical Advisory Group (STAG), are looking further into the issues of how appropriate and proportionate monitoring arrangements could be operated. I will certainly ensure that your concerns in this regard are considered, although we are of the view that these could be addressed in large part through appropriate training and guidance for teachers and monitors at the start of the course.

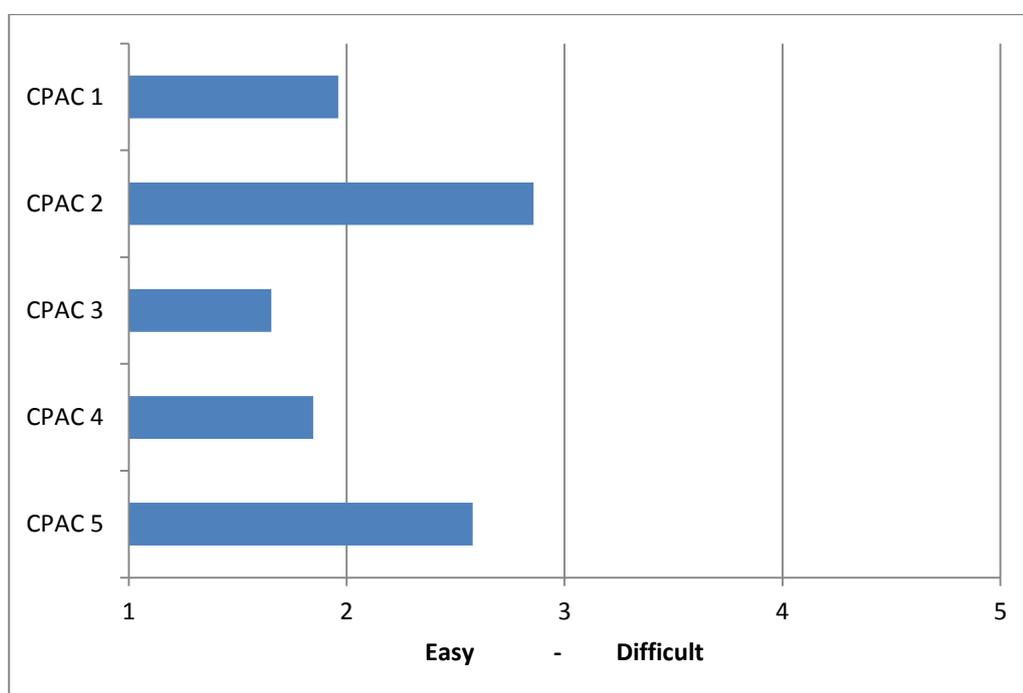
## **Laboratory books**

We would agree that examples of good practice in what constitutes an effective laboratory book could be useful for centres and we will look at providing these, over time. We are less sure we agree that consistency is essential in this regard and we think that learners and teachers can develop a number of equally valid approaches to record keeping that will fit their circumstances, their approaches, their styles of learning etc. Flexibility here could also assist learners with protected characteristics. Therefore, we do not think it would be appropriate to be prescriptive in this regard.

### Common practical assessment criteria (CPAC)

We agree that teachers involved in the trials found CPAC2 and CPAC5 the most challenging of the assessment criteria to apply effectively. This is perhaps unsurprising given these assessment criteria focus on skills that are not currently assessed. However, I am not entirely sure that I would agree with your assessment that there is "wide interpretation". The graph below illustrates teachers confidence levels in the application of the criteria. Nevertheless, we shall certainly give further consideration as to appropriate guidance and support for teachers in the application of all the criteria, in particular CPAC2 and CPAC5.

*How easily could you apply the CPAC?*



### Equipment, resources, consumables and facilities

We agree that it will be important for staff in schools and colleges to be clear as to the requirements for properly conducting the practicals. This will be particularly important where these may have significant resource implications. We believe that such guidance is provided most effectively on an individual awarding body basis – linked to individual specifications – and I can confirm that each awarding body is committed to such provision.

### The importance of the practical endorsement for HE

We agree entirely that it is important that universities view the endorsement as a critical and central part of the science A-level. We are confident that they will. I interpret Dr Andrew Shore's comment at the 16th December event to be a very clear indication as to the importance that HE is likely to attach to the practical endorsement. His comment can be seen towards the end of the film of the

event. We agree that ongoing dialogue between awarding bodies, HE and Ofqual to reiterate the centrality of the practical endorsement is crucial and we are all committed to this.

### **Malpractice**

We are discussing with colleagues within the awarding bodies who deal with issues of malpractice how best the specific requirements of the practical endorsement can be accommodated within the existing JCQ malpractice framework.

### **Carrying forward practical endorsement results**

We agreed that clear guidance is required here and this will be available by the summer term this year.

As I said in my earlier acknowledgement of your letter, it was a very great pleasure to see so many of your SCORE colleagues at the 16th December feedback event. I entirely agree that such ongoing contacts between the regulator, awarding bodies science staff and members of the wider science community, including members of SCORE, will be important in ensuring the success of the new approach to science practicals. I very much appreciate your offer of further assistance.

Yours sincerely



Kevin Phillips  
Chair of the Inter-board group on A-Level Science Practical