



# Changes to the assessment of practical work

Summary of a seminar organised  
by SCORE at the Wellcome Trust

17 October 2014

# Changes to the assessment of practical work

This is a report of a SCORE seminar held on 17 October 2014 at the Wellcome Trust. The report summarises the presentations made at the seminar and discussion.

## 1 Background

Currently, practical skills are assessed in science A-levels through tasks set either by the awarding bodies or by schools and colleges, with the assessments supervised by teachers, and marked either by them or by the awarding bodies. The result then contributes to the student's overall grade in the subject.

From September 2015 the following changes will be made to A-level courses in the sciences in England, but not in Wales or Northern Ireland:

- Students taking biology, chemistry and physics will have to complete at least 12 practical activities in each during the course
- These activities will be directly assessed by teachers
- Attainment in these practical activities and competence in practical work will be reported as a pass on the A-level certificate, but as an endorsement alongside the qualification grade rather than contributing to it

- This endorsement will not carry UCAS tariff points and failure to get the endorsement will not be reported
- Separately, written exams in biology, chemistry, physics and also psychology will include "questions about the theory and application of practical skills". These questions will form at least 15% of the total marks for each of biology, chemistry and physics
- There will be a series of checks on schools' assessments of students by awarding bodies. Ofqual will also explore with its fellow regulator Ofsted whether the latter could check that schools are offering students a proper chance to work practically in the sciences

The aim of the event was for SCORE and higher education institution admissions officers and tutors to gain an understanding from Ofqual and UCAS on the technical issues related to this separate marking of practical work in the sciences and how higher education institutions will respond.

## 2 Presentation by Dennis Opposs, Director of Standards, Ofqual – reasons for reform

Mr Opposs set out the reasons why Ofqual is reforming the way practical work is assessed at A-level. The regulator feels there is not enough discrimination between different levels of performance. They have also identified the following issues:

- Students' grades for the practical assessments often exceed those for their written exams and there is a lack of discrimination
- Overall grades do not reflect students' practical attainment
- Higher education representatives have said the technical and manipulative skills of students entering courses are generally not strong enough
- The current method of assessment can limit students' experience of practical work

- The results cannot be validated effectively
- The form of the current assessments and the pressures in schools and colleges create the potential for malpractice

Mr Opposs then detailed the changes for the A-level courses, as outlined in section 1, explaining that these new arrangements were subject to a trial, which took place in the autumn term in 2014. This trial allowed Ofqual to decide how the awarding body checks on practical working in the sciences at A-level would be carried out, including the warning given to schools and colleges in advance of visits and what they will be expected to demonstrate during the visit. The trial also considered whether the workload for teachers will be manageable.

### 3 Presentation by Ben Jordan, Senior Policy Adviser, UCAS – use of the practical endorsement by higher education institutions

Mr Jordan outlined the possible ways that higher education institutions might use the new endorsement for practical work in the sciences in their admissions process. He suggested that the endorsement for practical skills might be:

- directly expressed as an entry requirement for a particular course
- included as a condition in individual offers to students
- used as part of the holistic consideration of an applicant's application by institutions, and institutions could say they 'welcomed' applicants with the qualification

Mr Jordan stated that use of the practical grade in the admissions process would depend on its relevance to the course that the applicant is applying to. He expected the practical endorsement to be an important element of the admissions system for degrees in the sciences and mathematics, with it explicitly listed in entry requirements and offers. He was unsure how the endorsement would be used in other subjects, and suggested that a pass in practical science might be used as an additional piece of information or consideration rather than as an entry requirement. Other considerations made by higher education institutions about the use of the science practical could be as follows:

- For simplicity purposes, universities may not wish to make 'special arrangements' in their admissions process for the separate endorsement assessment of practical skills, when the Welsh/Northern Irish equivalent qualifications include this in the final awarded grade, and the many other qualifications they need to consider
- Some institutions might choose to assume that all students are 'starting from scratch' with regard to practical skills in the sciences, and plan to teach those skills important to a certain course during their degree
- There is a lack of clarity regarding the percentage of learners that would pass the practical grade

The message that UCAS has received from higher education institutions was that they wanted to be provided with information on a student's performance in practical skills. This will likely happen in the following two ways:

- UCAS Apply: on the application form there would be room for practical endorsement prediction
- Awarding Body Linkage process: during the process where UCAS push results to institutions, information on a student's performance in practical skills will be available

### 4 Panel discussion with admissions tutors

Admissions tutors and officers from higher education institutions reported how they were likely to respond to the changes to the assessment of practical work in the sciences at A-level.

Dr Andrew Shore, an Admissions Tutor in the School of Biosciences at Cardiff University expressed support for the use of the endorsement for practical skills in admissions. He said he "could not imagine" his own department not specifying a pass in practical science as part of its admissions process. He also works with the Admissions Subcommittee for the School of Medicine and would recommend the use of the endorsement in the medical admissions process.

Amy Smith, Admissions Coordinator at Nottingham Trent University, explained that admissions practitioners at her institution had expressed support for considering the endorsement for practical work during the admissions process, even for business, law and social sciences courses.

Stewart Harper, Head of Student Admissions at Leeds Beckett University, explained that he and his colleagues had not yet come to a firm conclusion about how they will use the practical endorsement, but they are considering using it as a 'differentiator' for determining entry to those courses where supply exceeds demand, as opposed to necessarily being an expectation in every case.

Jess Granger, Admissions Policy Manager at King's College, London, said she was consulting with colleagues on how to respond if a student failed the assessment in practical work. She said if schools and colleges were unlikely to predict a failure in practical skills assessments for any of their students, then the assessments "would not be a useful tool for us in distinguishing between people at initial selection, as opposed to confirmation of offer, stage. However we would reiterate that for students seeking to study science at university, development of practical skills and knowledge are important, and to be encouraged."

Lynsey Hopkins, Head of Admissions at the University of Sheffield, said there were likely to be diverse views across her university on how to respond to the change. She and her admissions colleagues had concerns that specifying a pass in practical work could be unfair if students had otherwise performed very well in their A-levels. In particular, she felt that it would be unreasonable for tutors in non-science subjects to demand the endorsement for practical work if students had passed the qualification. She did however state

that there is broad agreement on the importance of practical skills within science A-levels and the university did not want to see these downgraded in schools.

A key theme arising from the panel discussion was a concern about widening participation, and whether the insistence on a pass in practical assessment would negatively impact certain groups, such as students from particular schools.

## 5 Issues raised by delegates

Questions were then taken from the floor, with answers provided by seminar speakers and panel members:

- Professor Peter Main raised the possibility that a public statement from higher education institutions that A-levels should include practical work could be published
- There was a discussion on the pass rate of the practical endorsement. Dennis Opposs stated that if 100% of students achieved the endorsement for practical work there would be concerns that the level was not correctly set. However, some attendees felt that it would be positive if all students were to pass the endorsement, since it showed they had been able to practise their skills throughout the course. Admissions tutors at the seminar said if all students passed the endorsement it might not be useful as a selection device unless there was good quality assurance from awarding bodies
- Delegates raised concerns that reform to the assessment of practical work in the sciences at A-level might mean that schools fail to offer practical skills experience to their students. Ofqual confirmed that a school not offering practical work in the sciences would not be following the requirements of the A-level specification, so they would expect action to be taken
- Clarification was provided on the following points by speakers and delegates:
  - Awarding bodies expect to provide training and support about the changes in practical science, as they currently do for practical skills assessment
  - Ofqual assumes that teachers will be able to spread out the practical assessments as they choose, but it may be that the boards have some expectations on this. This is being investigated during the trial

The following issues were also discussed:

- The endorsement will not carry any UCAS Tariff points but there are no barriers to UCAS processing it as part of an offer
- There is some concern around the quality assurance procedures; in particular, if the pass rate is to be at or near 100%, there is a risk the endorsement would not be respected by universities unless there is an auditable quality assurance mechanism
- If no one is predicted to fail the endorsement, it will not be helpful as a filtering tool for offers, which makes it less likely to be seen as important at the admissions stage
- Admissions tutors may opt for the simplest approach, to ignore the endorsement, given that they also have to consider other A-levels and qualifications to which it is not attached
- Universities are finding it difficult to settle on an agreed policy, which is likely to lead to a wide variety of behaviour, particularly for admissions onto courses that do not have the A-level as an admissions criterion

## Next steps

As an outcome from the seminar, SCORE decided to produce a guide for admissions tutors to inform those who were not at the meeting of the discussions and to present SCORE's view on the changes and what it means for the admissions process. Please see the guide at [score-education.org](https://score-education.org).



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SCORE, a partnership of organisations working together on science education policy:

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