

Consultation on the new A level regulatory requirements

A response from the Heads of University Biosciences (HUBS) to Ofqual

17th January 2014

The Heads of University Biosciences (HUBS) membership comprises over 80 higher education institutions in the UK, represented by biological and life science heads of departments and subject leads. HUBS provides a forum for discussing national issues on the provision of research and teaching in the biosciences, and as a source of informed comment on the consultations that affect HE institutions delivering in the biological and life sciences.

HUBS is a special interest group of the Society of Biology.

www.societyofbiology.org/education/hubs

Summary

HUBS welcomes the plans to improve Biology A level and supports the notion of changes that will increase emphasis on practical work. However, HUBS are not confident that the current proposals will deliver this; in fact, there is a real risk they will have the opposite effect.

In particular, HUBS rejects Ofqual's proposal to separately assess practical skills in Biology A level. Universities are highly unlikely to use this information to select candidates for bioscience degree entry, and this development appears to offer significant potential for downgrading the teaching and learning of important practical skills in schools and colleges.

HUBS is disappointed that the reform process to date has only requested limited contribution from university representatives. We hope there are opportunities to do so in an open and constructive manner before changes to the A level criteria are finalised by Ofqual.

In detail

The Heads of University Biosciences (HUBS) welcomes the plans to review and reform A levels in biology, to better prepare students for progression to higher education. This is an ideal opportunity to make a difference to education in England and we would be very willing to contribute to this process. However, HUBS has a number of concerns about the reform process which we believe must be addressed if the review is to fulfil its intended aims and meet the needs of higher education. In particular, we are concerned about the proposed arrangements for the assessment and reporting of practical skills in the sciences.

Biology is an intrinsically practical subject. It is essential that students are given opportunities to master the range of investigative and practical skills that underpin the understanding and development of scientific knowledge. Therefore HUBS has serious concerns regarding the current proposal that a student's ability to directly undertake practical work will be assessed

and reported separately from their A level grade. This approach divorces theory from practice and will mean that practical skills no longer contribute towards a student's final grade in A level biology.

The consultation documents give little consideration to how the separate grade for practical skills will be reported for use in the higher education admission process or what weighting, if any, will be assigned to it. Nor is there reference to how the changes will be thoroughly and appropriately communicated to higher education. In addition, there is no reference to how the separate practical grade will be derived or validated. Whilst the practical skills and attitudes set out in appendix 5 of the criteria documents reflect the competences and attributes that higher education wish to see, the separation of these skills from the overall assessment framework is a significant problem.

A qualification in which biology students can achieve top grades without demonstrating their ability to translate knowledge into practice is misrepresentative of the nature of the subject. It does not encourage students to develop their aptitude for using practical science to solve questions in biology, build evidence-based theories or deepen their conceptual knowledge – skills that lie at the heart of scientific research and endeavour.

In addition, there is a significant risk that it will lead to a diminution in the amount of practical training undertaken in schools, leaving students poorly equipped for progression in the biosciences. This will further exacerbate the current lack of confidence in the lab and field, and the practical skills of students entering higher education.

The consultation document states an assumption that higher education institutions will use the practical grade as part of their offer-making process. However, without appropriate accountability and reporting measures (for example, through UCAS) in place, HUBS do not agree that universities will use the practical grade as part of their admissions offers to biological science programmes. In addition, the current proposals do not appear to take into consideration that many institutions have centralised admissions systems and no longer have departmental admissions tutors able to read through detailed UCAS forms to identify those students with the requisite breadth of practical skill and experience to succeed in their courses. Admissions tutors are best served by a single grade that encompasses the entirety of the student's experience, knowledge and understanding.

Although a minority of HUBS members have been consulted during the course of the reform process, there has been no discussion, prior to the public consultation, on the proposals to alter the practical assessment in the manner proposed. Practical skills are an essential part of science, and preparation for higher education, and should be included and assessed as part of an A level science qualification. HUBS therefore believe it is essential that more time is made available to properly explore how direct practical assessment in science can be appropriately conducted and authenticated. This must be carried out with input from across the range of key stakeholders.