

Science Community Representing Education (SCORE) News Release

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Difficulty report tarnishes A-level gold standard, the science community responds

A-level grades and the UCAS point-scoring system, which treats all subjects as equally difficult, has been tarnished by new research, published today, Tuesday, 1 July, which shows that some subjects at A-level are more difficult than others, says the science community.

With 250,000 A-level results analysed over five robust statistical methods, it has been shown that it is easier to achieve the top grades in subjects like Media Studies and Psychology than it is when taking subjects like Maths, Physics and Chemistry.

The new research from Durham University, which was commissioned by the Institute of Physics (IOP) and the Royal Society on behalf of the Science Community Representing Education (SCORE), runs contrary to a report released by the Qualifications and Curriculum Authority (QCA) in February this year, the 'Inter-Subject Comparability Study', which stated that there are "no substantial or consistent differences in standards between any subjects at any level".

With UCAS points, derived from A level grades earned, being the clearest determinant of where a student will attend university, there is concern that students are influenced towards taking 'softer' subjects to obtain the highest points score and hence the best university places. High grades also assist a school's position in annual, exam results-based, league tables.

Daniel Sandford-Smith, Head of Education Pre-19 at the Institute of Physics, said, "A system that collects and publishes annual data on the relative difficulty of subjects should be introduced by Ofqual to allow open but informed discussion on the topic.

"The introduction of an annual report that exposes the relative difficulties of A-levels would encourage a transparent, market-led approach, helping universities to choose between the brightest candidates.

"Honesty about the level of assessment in different subjects will also encourage the brightest students to tackle the more challenging subjects, in the knowledge that their achievement will be recognised and will result in the greatest rewards."

Professor Michael Reiss, Director of Education at the Royal Society, said, "The worry is that some good students are put off taking Maths and Science A-levels because it's harder to get a good grade in them. Anything that discourages students from taking these subjects, which are so important for the future prosperity of the UK, is really bad news."

The researchers, from Durham University's Curriculum, Evaluation and Management (CEM) Centre analysed and compared data from nearly one million schoolchildren sitting GCSE and A-level exams and reviewed 28 different studies of cross subject comparison conducted in the UK since 1970.

Ends

Contact for further comment

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The Research

2. The report, *Relative Difficulty of Examinations in Different Subjects*: Coe et al, has been published by The Curriculum, Evaluation and Management (CEM) Centre at Durham University. For a copy of the report or to contact the report's authors, contact Durham University's Media Relations Office on 0191 334 6077 or e-mail c.r.stiansen@durham.ac.uk.

Science Community Representing Education (SCORE)

3. SCORE is comprised of key players in the science community, the Association for Science Education, the Biosciences Federation, the Institute of Biology, the Institute of Physics, the Royal Society, the Royal Society of Chemistry, and the Science Council, who have all become increasingly concerned about a number of long-term trends within science education.

The partnership was set up to bring collective action to bear on these trends, focussing in particular on the serious problems of the decline in numbers of young people taking A level physics and chemistry and the unacceptable shortage of specialist teachers in these subjects in our schools and colleges. For further information, go to <http://www.score-education.org>.

The Institute of Physics (IOP)

4. The Institute of Physics is a scientific membership organisation devoted to increasing the understanding and application of physics. It has an extensive worldwide membership (currently around 34 000) and is a leading communicator of physics with all audiences from specialists through government to the general public. Its publishing company, IOP Publishing, is a world leader in scientific publishing and the electronic dissemination of physics. Go to www.iop.org.

The Royal Society

5. The Royal Society is an independent academy promoting the natural and applied sciences. Founded in 1660, the Society has three roles, as the UK academy of science, as a learned Society, and as a funding agency. It responds to individual demand with selection by merit, not by field. As we prepare for our 350th anniversary in 2010, we are working to achieve five strategic priorities, to:

- **Invest** in future scientific leaders and in innovation
- **Influence** policymaking with the best scientific advice
- **Invigorate** science and mathematics education
- **Increase** access to the best science internationally
- **Inspire** an interest in the joy, wonder and excitement of scientific discovery