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# GCSE AND A LEVEL CS

The highs and lows of this year's exam results

**A**ugust saw GCSE and A Level results days in England: as a co-author of the TRACER analysis of pupils' and schools' performance in these exams, I was understandably interested in how things went with the most recent series of exams.

At GCSE, I am, of course, delighted that so many students did so evidently well in their exams: congratulations to them and their very hard-working teachers! That said, I'm still appalled that, due to suspected malpractice, exam regulator Ofqual took the decision to give no marks for anyone's work in the practical programming project (the NEA), while still insisting that schools set 20 hours aside for student to work on this literally pointless task. When the BCS successfully argued for the inclusion of CS in the EBacc performance measure, they said: "Maintaining a significant project based assessment component is one of the best ways to ensure pupils have the chance to solve complex, challenging computational problems that also demonstrates their potential for being innovative and creative, which we feel is a very important aspect of developing computational thinking."

It astonishes me that, as things stand, students could, theoretically, have got an A\* in GCSE CS without being able to, well, code. As we move forward, we must get back to a position where practical programming counts: there's a persuasive case made for mandatory practical endorsement, as we see in GCSE science, but I'd like the boards to look seriously at on-screen programming exams, or day-long, unseen lab work.

This summer saw the last ever GCSE ICT: few would mourn its passing, but the lack of any replacement disturbs me, as it seems to result in fewer students studying any aspects of computing at GCSE, a narrowing of the subject's scope to CS only, and a rather less diverse cohort than previously. If we're serious about CS for all, and indeed IT skills and critical digital literacy for all too,

then perhaps a broader based GCSE in computing (i.e. foundations, applications and implications) might serve our students (and their future employers) better than what's on offer at the moment?

At A Level this year, despite the more demanding specifications, grades are up, the number of girls taking the subject increased by nearly 50%, and the overall numbers are now (just) higher than they were back in 2003. Unlike at GCSE these days, practical programming is a big part of the A Level, and students across the country produce some amazing work, including some fab projects based on the Raspberry Pi, such as Andrew Mulholland's PiNet ([pinet.org.uk](http://pinet.org.uk)).

Even if A Level CS is still not an entry requirement for CS degrees (!), the Russell Group acknowledge A Level CS as being useful preparation for many degree subjects (maths, the sciences, engineering, medicine, economics, and so on), recognising that work in all these domains is increasingly likely to demand at least some coding skills. And yet, only 36% of schools and colleges offered this A Level in 2017, and even in those that do the class size is typically very small and may well be economically unsustainable. Perhaps it would be different if CS, like the other sciences, was recognised as a 'facilitating subject'; in other words, one that leaves open lots of options for degree choices? Latin and Greek both make this list: there's nothing wrong with either of those, but perhaps studying CS at A Level might actually be better preparation for university (and employment) these days? **[HW]**

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