

How enrolment in a university technical college affects student outcomes



Boris Johnson has put the government's skills policy agenda in the spotlight. In a [recent speech](#) denouncing skills shortages in several technical occupations, the prime minister vowed to "end the pointless, nonsensical gulf... between the so-called academic and the so-called practical varieties of education".

University technical colleges ([UTCs](#)) are state-funded 14-19 schools established by the government in the past 10 years with a very similar intent. UTCs were conceived of as a response to a growing technical skills gap and to the perception that young people lacked an adequate and engaging technical skills provision at school.

The cornerstone of UTCs is a teaching curriculum that blends core academic subjects with technical subjects that meet regional skill shortages (such as engineering, manufacturing or digital technology). UTCs also benefit from the direct engagement of local universities and employers: industry experts help design and deliver project-based learning, seeking to develop the skills and attributes valued in the workplace.

There are currently 48 UTCs open in England, according to Department for Education figures for September 2020. The first UTC opened in 2010; since then 58 more opened across England.

Despite this expansion, over the years the UTC model has been [logged with controversy](#). As new schools with no established record and a lack of publicity, UTCs struggled to recruit enough students; recruitment at age 14 proved particularly challenging as typically English students would not change school at that age. Low operating capacity has dented the financial viability of a number of UTCs, resulting in 11 closing or changing status.

UTCs have also been criticised for their [poor performance](#) in national examinations. Part of this poor performance, however, might be owing to the fact that UTC students look very different from typical students.

In our study on the effectiveness of UTCs, we evaluated the causal effect of enrolling in a UTC on student outcomes. Our research focuses on 30 UTCs that opened between 2010 and 2014: we followed cohorts of students who enrolled in a UTC either in Year 10 or Year 12. Our findings reveal a stark contrast between pre- and post-16 UTC provision.

With Year 10 enrolment, we found that enrolling in a UTC has a detrimental effect on GCSE achievement: students who attend UTCs are 26 percentage points less likely to get five or more GCSEs with good grades than similar non-UTC students, a large negative effect equivalent to twice the achievement gap between disadvantaged and non-disadvantaged students.

UTCs also significantly reduce students' chances of achieving grade C (now grade 4) in English and maths. These results are concerning. Research at the Centre for Vocational Education Research (CVER) warns about the negative consequences of students missing out on grade C in English, limiting student progression over the longer term.

We find no such detrimental effect on education outcomes for Year 12 entrants: UTC enrolment does not affect students' probability of achieving at least one A level and makes them much more likely to enter and achieve a technical qualification at level 3.

Perhaps unsurprisingly, we find a strong effect on the probability of entering STEM qualifications (higher by 25 percentage points). Impressively, UTCs increase students' probability of starting an apprenticeship by 14 percentage points.

We also documented positive effects of UTC enrolment up to one year after leaving school. While UTCs do not appear to be better (or worse) at sending students to university, they are very good at propelling students into STEM (science, technology, engineering and maths) degrees. Also, they enable transition to the labour market: as a result of UTC enrolment in Year 12, students are 3 percentage points less likely to be NEETs (not in education, employment or training) one year after leaving school.

What can explain these dramatically different results?

One concern is that combining the academically demanding GCSEs curriculum with additional technical subjects at a time when students are also adapting to a new school may prove too challenging, especially in view of the fact that students moving school in Year 10 are doing so at a non-standard transition time. Furthermore, Year 10 recruits are less academically able than Year 12 recruits (in terms of maths and English test scores), and we find that UTCs are better at teaching more academically able students.

As more UTCs move to recruit students at a natural transition point (at age 11 as well as age 16), this might improve their performance to the extent that they become better able to attract a higher attaining group of applicants and have a longer time to teach the broader curriculum before exams at age 16.

More generally, we need to bear in mind that UTCs are new schools and shouldn't be judged too hastily. We find some evidence that UTCs improve with time. While the jury is still out on the longer-term effect of this policy, our study gives grounds for hope.



Notes:

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