



Education: Skills must match up with jobs

By Andrew Bounds

COMPANIES MENTIONED

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Case study: Life science college has replaced school uniforms with lab coats

If it were not for the youthful faces, you would think you were in a biotechnology company.

White-coated technicians move around the lab, comparing notes and recording data on tablet computers as they run tests on a novel protein.

This is a school in Toxteth, Liverpool, one of the most deprived parts of Britain, and the technicians are pupils.

The teenagers have been learning to grow green fluorescent protein (GFP), a molecule with artificially created DNA, in a test set by Eden Bioscience, a local business.

It is the sort of project normally tackled at university, and Dave Hornby, a university professor on secondment, is running it.

Prof Hornby says he is "staggered" by pupils' skill, tackling work reserved normally for PhD students.

The life sciences University Technical College for children aged between 14 and 18 is one of dozens of business-backed institutions being set up in the UK to tackle the chronic shortage of vocational skills.



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They are funded by central government but local employers help equip them and enhance the curriculum.

The college's three labs, worth £5m, are the equal of many owned by private companies, while a teaching area for nurses includes a bed space copied from the National Health Service, the state health provider, and a sophisticated dummy patient. There is also a mock pensioner's home for those interested in becoming care assistants, a booming industry as the country ages.

Neil Murray, chief executive of RedX Pharma, a Liverpool-based biotech company that provided the lab coats, says he wanted to reverse the "skills erosion" in schools, where the health and safety culture means most experiments are conducted by teachers not pupils.

"Kids get turned off science, because the one thing that attracted them is the hands-on process, creating a bang and flash."

His company and others need skilled lab staff as much as PhDs, he says. "In life science we don't have an equivalent of the German and Austrian system, where qualified lab technicians are valued members of staff and [it is] a real career in its own right.

"Here, we have not valued people who are 'green fingered' and can do practical things in the way we have valued academic qualifications," he says.

Pupils also study for conventional GCSE and A-level secondary school qualifications, with the school day lengthened to accommodate extra work and 100-minute classes rather than the usual hour.

Some spend month-long placements with employers while business people give regular "masterclasses".



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Unilever, the consumer goods group, and Novartis, the pharmaceutical group, are among those involved.

Some pupils travel up to an hour to attend and others switched from fee-paying private schools when the college opened in September.

Maria, 17, says she enjoys doing "real research" while Elizabeth, also 17, says she has already decided to become a radiographer: "I'd never heard of that job before coming here."

Phil Lloyd, the college's principal, says the key lies in teaching small groups in ways that help them learn best. That could be by listening, but also by doing, seeing, or even moving as they work.

"It is what UK plc has needed for 30 years, but no one has been brave enough to do," he says.

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