

‘I feel lucky to have such a rewarding career’: the engineer scaling new heights in further education

Originally published in a paid partnership with the Guardian Labs

Rosa Wells made more of what she knows by sharing her life-long passion for engineering with FE learners

by [Emma Sheppard](#)



Aeronautical engineer Rosa Wells. Photograph: Christopher L Proctor/The Guardian

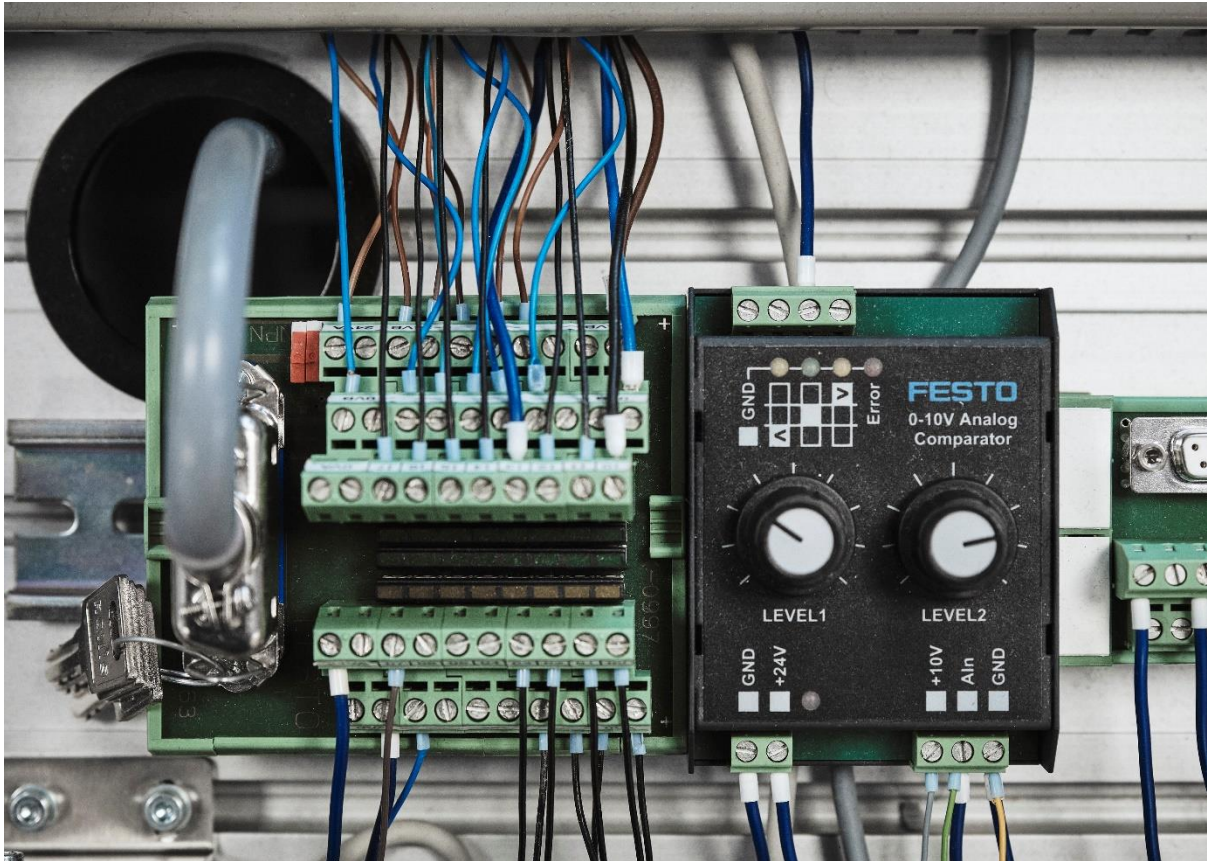
Ask Rosa Wells to list the highlights from her career teaching in further education (FE), and she’s spoiled for choice. There’s the young man she supported to do a higher national certificate (HNC) in electrical and electronic engineering, who then secured his dream job in Formula One, and the student she encouraged to go to university, who now has a master’s in engineering leadership. She’s also particularly proud of the mature students she’s helped balance studies with their family life, and the recent honour of being awarded a [technical teaching fellowship](#) for outstanding achievement in science and engineering.

“I remember going out for dinner with friends a few years after I started teaching in FE, and they all said they wished they had a job they loved as much as I loved mine,” she says. “I feel so lucky to have found such a rewarding career.”

Wells grew up in Birmingham and started her professional life in the aerospace manufacturing industry. She was always fascinated by how things worked, and as a young child was constantly taking her toys apart with a screwdriver. Aeroplanes in particular captivated her. “I didn’t understand how these huge aircraft got into the sky. When I was about 10, I decided I wanted to be a pilot because then I’d find out how they worked. A family member who was an engineer said: ‘Well, pilots don’t know how they work but engineers do.’ So that was it. Engineering it was.”

Straight after A-levels, Wells secured a year-long industrial placement through the Engineering Development Trust, joining Lucas Aerospace, which manufactured the electronic engine control system for Rolls-Royce. She impressed her team so much that the company paid for her to do an aerospace engineering degree in Manchester, while working for the company over the summer holidays. Later she worked in France, researching whether the noise pollution of aircraft could be reduced by adjusting the shape of the jet engine’s nozzle. But neither manufacturing nor research felt like the right fit. “Manufacturing was about interacting with lots of people and problem solving, but I didn’t really find it stimulating enough,” she says. “Research was very interesting and stimulating, but I really missed the people.”





'It's really important that we're not just offering courses that students want to do but training that will develop into careers,' says Wells

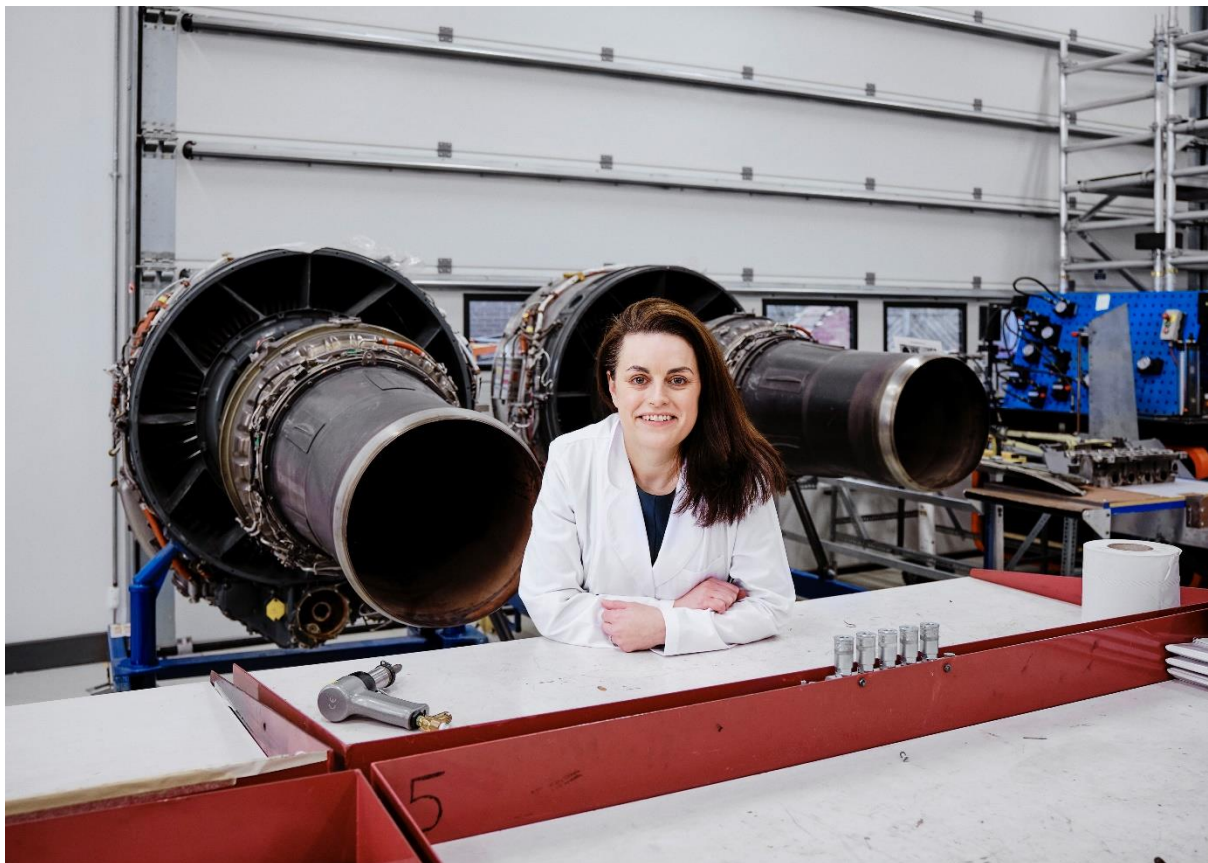
Back in the UK, Wells found herself thinking about how much she'd enjoyed helping her peers with their studies at university, and started to wonder if teaching could be the answer. "I knew people who taught in FE and they encouraged me to give it a go." With no previous teaching experience or qualifications, she was offered a job at Fareham college, near Southampton. Wells joined as an engineering lecturer, teaching in mechanical, electrical and aeronautical engineering for 18 hours a week. At the same time, she began studying part-time for a PGCE in post-compulsory education and training, funded by her employer.

"I instantly loved teaching in FE, but it was totally different to what I expected," she says. "For one thing, there's a huge diversity in the level and experience among the students. I was teaching 16-year-olds right the way through to 40- or 50-year-olds. But I enjoyed that challenge. I had to think about how to plan interesting lessons that would engage all learners at all levels. I learned to ride the highs and lows when one lesson worked really well and the next didn't quite hit the mark."

Today, Wells is the executive director for employment, skills and IoT (Institute of Technology) at Solihull College and University Centre. It's a hybrid role that combines teaching students to develop their

apprenticeships, projects and work-based learning portfolios, with leading the regional IoT, which coordinates the colleges and universities in Birmingham and Solihull to support the manufacturing and engineering sector.

“It’s really important that we’re not just offering courses that students want to do but training that will develop into careers,” she says. “And it’s not just about supporting the engineers of the future, but also about helping our existing engineering workforce to upskill as well. Because the college now teaches from level 1 (pre-GCSE) up to degree level, we’ve often got learners who have really specialist experience in certain sectors or technologies who can help our other students. It’s about building that whole cycle of learning, making sure you draw people in to enhance the experience for others.”





“

I instantly loved teaching in FE, it was totally different to what I expected

As well as landing dream jobs with F1, Wells' students have gone on to do master's degrees, degree apprenticeships, and work with prestigious companies such as Rolls-Royce, Aston Martin Lagonda, and National Express. One even joined the British bobsleigh team after studying for a BTEc engineering diploma.

Despite having worked in FE for 15 years now, Wells is as passionate about engineering as ever, and is keen to encourage others in the industry to share their skills. “If you love engineering, you're a natural problem-solver who is inquisitive and analytical, and that's exactly what we need in FE,” she says. “Colleges can be really flexible and will support you with training; you don't need a teaching qualification to start, we're always interested to see what experience people can bring to our learners.”

For Wells, FE has offered a level of career satisfaction she feared she'd never find. “Knowing you're changing learners' lives, getting to know them, hearing about the challenges they've faced and what they want to achieve, has been brilliant,” she says. “I've loved learning how to be innovative with my teaching and working collaboratively to continuously improve. I've found something I absolutely love.”

Your skills are more valuable than you realise. If you have relevant experience working in industry, you can start teaching in FE with no formal teaching qualifications. To find out how you can change lives without changing careers, head to teach-in-further-education.campaign.gov.uk