

EXECUTIVE SUMMARY

Further Education (FE) has been asked to fulfil a wide range of social and economic goals since the concept was introduced in the 1940s but one of its core goals has always been upskilling.

Skills are at the heart of the narratives around productivity, with economically successful regions tending to be more attractive to a wide variety of talent.

Many members of The Productivity Institute's eight Regional Productivity Forums report that skill mismatches are a key factor in inhibiting productivity growth in their areas. With the rising challenges of labour shortages across a wide range of occupations, the need for developing the right skills, for the right occupations and industries, and at the right time is even more critical to tackling the UK's productivity shortfall.

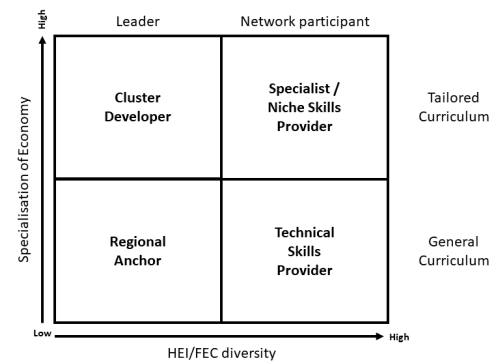
However, the FE system has experienced capacity challenges, has faced long-term spending cuts and needs more support to improve its impact and economic contribution.

A lack of transparency about the degree and nature of interactions between FECs, business, and government on demand and supply of skills, and challenges associated with embedding the assessment of skills needs and the solutions to meet those in a regional/local context, are important reasons why the assumed impact on innovation and productivity is often not visible.

It is likely that a stronger connection between innovation at the regional level and the skills required flowing from it are key to enhancing place-based productivity.

Since the early 1980s, the FE sector has been subject to 28 reforms. Each one has failed to deliver what was promised. The role of FE has also suffered from a lack of a clear mission, and a public spending bias towards the university landscape of Higher Education.

This review has looked at all the published research on Further Education Colleges (FECs) in the UK and their role in skills provision to the local and regional economy and finds that FECs have emerged as one of the focal points for innovation ecosystem development in regions. This report focuses on England because of notable divergence between systems in the devolved administrations of Wales, Scotland and Northern Ireland.



Key findings

- The evidence base on FECs and innovation is relatively thin. This is because of a lack of a consistent approach across all FECs.
- FECs operate in a layered policy environment that prioritises skills delivery. But that policy environment is constantly changing. They are often reactive rather than proactive.
- Businesses don't have much input into what FE colleges are programming, with a few exceptions.
- FECs will get involved in organisational innovation if the innovation ecosystem they are in engages with them.
- FECs are not all the same and could be differentiated by their actual and potential roles in innovation ecosystems.

EXECUTIVE SUMMARY

Further education skills provision

Existing research on FECs and innovation both in academic and political contexts is fragmentary and observational. There is a lack of empirical work (where knowledge is gained from concrete, verifiable evidence) to determine if FEC programmes generate sufficient return on investment in terms of their contribution to innovation ecosystems. There are various pathways through which FECs provide skills to the innovation ecosystem. This report focuses on three, with observations on:

Courses and curricula

- FECs offer courses which provide skills at all levels but overlap with higher education in providing Level 4 and 5 courses. There are regional variations in subjects offered, suggesting they are responsive to localised contexts.
- FEC course portfolios appear to be less stable than university offerings.
- Engaging with employers is difficult as in the UK, employers vary in their propensity to invest the effort required to improve skills and appear to prefer work experience to qualification in workers because of the large variation in FE qualifications.
- More strategies are needed to develop two-way relations between business and FECs to co-develop courses.
- Examples of strategies that encourage business-FEC interaction for course design and skill alignment can be found in Germany, Netherlands, Estonia, China and Spain.

Apprenticeships

- First documented in UK in mid-1500s and have been linked to the FE sector since the 19th century when students were locally employed and sent to college for formal training.
- Apprenticeships do not always lead to improved collaboration between the education sector and industry despite being driven by employer demand.
- The last three decades have seen frequent reforms including modern, advanced and higher apprenticeship schemes.
- In 2017, the Apprenticeship Levy was introduced as a tax on large organisations to fund

apprenticeship training. There's evidence this has had a positive influence on social mobility and the number of women entering STEM occupations, but they vary substantially in quality and outcomes and tend to have a lower completion rate than courses.

- Many apprenticeships require upfront skills that they claim to deliver through the apprenticeship programme.
- Unlike in the EU, the majority of UK apprentices have no "off-the-job" training – qualifications emphasise the skills proficiencies required by employers.
- There are regional clusters for apprenticeships in certain sectors.

There are three systems of vocational training:

1. School-based formal curriculum combining occupational knowledge (eg. France)
2. Formal apprenticeships without close links to education (eg. UK)
3. Dual vocational workplace learning under work contracts and classroom teaching (eg. Germany)

Enterprise and Entrepreneurship Education

- Defined as the process of equipping students/ graduates with an enhanced capacity to generate ideas and the skills to set up new ventures and businesses
- Offered at almost a third of FECs but very little evidence exists tracking the impact of these skills.

Innovation Ecosystems

An innovation ecosystem is a conceptual framework of organisations, education, business and individuals which collaborate and coordinate to create a supportive environment for new ideas to be developed and implemented. The ecosystem includes innovative firms, universities, research centres, and institutions, but also FECs, schools, suppliers, regulatory authorities, investors and business support organisations, accounting, law firms and the people within them. They are not industry-specific or rely on administrative boundaries and the focus is on knowledge sharing and value creation. Examples include Glasgow City Innovation District and Silicon Valley.

EXECUTIVE SUMMARY

A short history of FECs

1940s and 50s

- The term Further Education was introduced in the Education Act of 1944 to refer to technical colleges established to fill the gap caused by a lack of effective vocational education.

1960s

- Employers and unions became more involved in the curricula via Industrial Training Boards. The Boards operated on a levy-grant system where most private sector industries contributed and the funds were redistributed to organise training to meet industry needs.

1970s and 1980s

- The FE sector became more involved in Higher Education by offering academic courses that prepared for general work, rather than specific jobs.

1990s

- The biggest change came in 1992, when FECs were removed from the control of local government authorities. Polytechnics went on to become autonomous universities. By functioning as self-governing, centrally funded organisations responsible for the planning and execution of their own budget, curriculum, and marketing, the FE sector met the government's objective of creating a sector capable of being responsive and effective to the needs of local businesses and the national economy in general.
- The sector has never been fully autonomous but instead heavily shaped by national policy levers and by the funding councils that replaced local authorities in an oversight role.
- There was an emphasis on competition between FE colleges and franchising, but this led to an over-diversified and complex sector focused on financial, rather than academic performance.

2000s

- The Learning and Skills Council was introduced to plan and fund FE in an era of increased investment in the sector.
- FE and HE were increasingly seen as solutions to policy problems and the key to unlocking national and more localised competitiveness; economic engines that could unlock productivity and growth.
- This came with pressure on FEs to provide accredited qualifications, follow a more HE-like experience and culture, help reduce social equality, engage more with business and participate in innovation.
- Further education participation peaked in 2005 with

more than 3 million, trending down to 2.2 million in 2020, possibly due to a rise in apprenticeship uptake.

Further Education today

Today, FE focuses on post-16 practical and vocational training, or the gap between compulsory school and degree level studies, by offering learning covering:

- **Level 3** The ability to gain or apply a range of knowledge, skills and understanding at a detailed level. Includes A-Levels, BTECs, International Baccalaureate, Cambridge Technicals, Access Courses and T-Levels.
- **Level 4** Specialist learning, involving detailed analysis of a high level of information and knowledge in an area of work or study. Includes National Vocational Qualifications, Diplomas, Certificates of Higher Education.
- **Level 5** Ability to increase the depth of knowledge and understanding of an area of work or study so as to respond to complex problems and situations. Includes Foundation Degrees and Bachelors Degrees.

There are a wide variety of FECs with a high degree of overlap. The main types are colleges, Independent or Private Training Providers, Local Authority providers, Employer providers, Third Sector providers, and Adult Community Education providers. They do not always award their own qualifications (with the recent exception of Foundation Degrees), and as such have differing links to awarding bodies.

Colleges are the most numerous and significant FE provider in the UK and include General Further Education (GFE); Institutes of Technology; Land-based colleges; Sixth Form colleges; Art, Design and Performing Arts Colleges; Specialist Designated Colleges; and National Specialist Colleges. GFEs and Land-based colleges are most associated with innovation in England.

The main areas of FEC qualifications are:

- Health, Public Services and Care
- Engineering and Manufacturing Technologies
- Retail and Commercial Enterprise
- Construction, Planning and the Built Environment
- Information and Communication Technology

Students at FECs tend to live closer to where they study. The average distance from student home postcodes to learning location for undergraduates is 15 miles for FECs compared with 54 miles for universities.

EXECUTIVE SUMMARY

Skills and FEC roles in the innovation ecosystem

FECs need to be actively involved within an innovation ecosystem to help understand the labour markets that their graduates hope to enter. Cultivating networks that provide market insights and feedback and recruiting and retaining private sector involvement is a vital element of FEC success in skill delivery.

While separate from the 'core' mission of skills provision, FECs need to interact with their environment to support innovation. This engagement can support and help refine teaching and training offerings by providing greater access to employers, feedback about emerging skills requirements and opportunities, and more extensive training grounds and testbeds for learners. Local firms and governance organisations also typically benefit.

However, research shows that FEC senior managers often feel that innovation and external engagement is beyond their institution's core learning and skills goals. They also note the lack of continuity, clear expectations and appropriate support structures in the policy landscape for FECs and skills.

Some FECs don't have the bandwidth to quickly respond to local needs, and businesses aren't always able to articulate their requirements, contributing to bottlenecks. Skills are seen as the main FEC outputs that contribute to innovation, but this word is poorly defined. In published research, there is no consensus on what factors are critical to defining skills which can include soft skills, generic skills, technical skills and digital skills.

FECs can get involved in innovation through:

- **Pooled equipment and infrastructure provision** Facilities and specialised equipment that can enable innovation and development and be used by business. In some cases, the infrastructure sharing relationship can go both ways, as can knowledge diffusion and process innovation.
- **Business support and incubation/accelerator services** Through both physical hubs, support services and networking opportunities. This provides both revenue and the opportunity to expand the range of FEC partners, however these offers are not always promoted or bundled in ways to fully leverage benefits.
- **R&D, knowledge, and technology transfer** FECs can be well suited to solving technical, process and social problems and add value through their knowledge reproduction and diffusion roles but much of this appears to be ad hoc and opportunistic. FECs can also focus on their role helping organisations recognise the value of new information and work to embed and implement change.
- **Local anchor, leadership, and networking** Anchor institutions make a strategic contribution to a local or regional economy; they are likely to be real estate owners and large employers. FECs have a strong interest in their local economic policy and have a unique position to lead on labour pool and skills demand trends.

Future steps

- 1. Aligning policy objectives and FEC incentive structures** A more thorough understanding of how the often-turbulent policy environment impacts FEC strategies, the trade-offs that they must consider given competing policy demands, all relative to available public and internal resources. This will help to align incentives.
- 2. Inspiring innovation and empowering FECs** Learning more about the internal factors that enable FECs to change the ways that they operate, institute new programmes and practices, and think about their own organisational evolution is vital to effectively steer strategies to service public policy objectives.
- 3. Selecting the right tools for the job** It is not clear which programmes, mechanisms, types of engagement etc. are most likely to achieve the objective of reducing skills mismatches. There can be many variations in implementation and mixes of mechanisms adopted a question if all FECs be attempting all types of engagement.
- 4. Measuring inputs and outcomes** Getting more and more appropriate data is key. On the input side, more detail about employer skills needs, spatial trends, and programmes will help to better conceptualise alignment issues. Measuring outcomes to determine impact is also crucial to refine strategies.