Dear Sir/Madam,

The IET’s response to the British Chambers of Commerce Commission on the training and development of adults in the workplace

The Institution of Engineering and Technology (IET) is Europe’s largest professional engineering and technology organisation with 168,000 members drawn from industry, academia and the public sector. The members represent a wide range of expertise, from technical experts to business leaders, encompassing a wealth of professional experience and knowledge. Our primary aims are:

- to provide a global knowledge network, promoting the exchange of ideas between business, academia, governments and professional bodies, and enhancing the positive role of science, engineering and technology
- to address challenges that face society in the future.

Our response is based primarily on the findings of the IET’s Skills and Demand in Industry Survey 2019, a biennial report, which gauges the evolving state of skills in UK engineering and technology sectors. The survey collected the views of over 700 UK employers of engineering and technology staff and highlights the chronic shortages in related skills in the UK. The survey provides evidence and case studies detailing employer approaches to training, upskilling and reskilling.

We would be happy to discuss the findings of the survey in relation to your questions in more detail and provide examples of best practice from our extensive networks of engineering employers and academic partners. Please feel free to contact myself or Stephanie Baxter (Education, Skills and Innovation Lead) sbaxter@theiet.org to arrange this.

Yours faithfully,

Joanna Cox

Head of Strategic Engagement and Partnerships

Institution of Engineering and Technology
Key messages

- There has been a general increase in companies providing training for operative-level employees. However, there has been a significant decrease in training for professional-level engineering and technical staff.
- 68% of employers have arranged or funded technical or job specific training for their engineering or technical staff in the 12 months prior to our survey.
- More than half the companies with 250 or more employees have linked up with universities to deliver training (53%), compared with just 14% of companies with less than 25 employees.
- Only 26% of companies have partnerships with FE colleges or universities to help them develop courses that match their needs.
- To retain talent, businesses need to keep developing their staff through flexible learning models, allowing training to fit in around work and home life.

Our recommendations

- Employers should take advantage of the growing range and network of flexible, individually tailored and digital approaches to upskill technical staff. This is particularly beneficial for SMEs where resourcing pressures, capabilities, size or location may preclude traditional training routes.
- All employers should formally adopt ongoing workforce development and upskilling initiatives as a means of enhancing competitive advantage and commercial success.
- The Government should give employers greater flexibility on spending for skills development, relaxing apprenticeship levy restrictions and supporting alternative, high-quality training options.
- To improve potential recruits’ workplace readiness and employability, more employers should commit to delivering high quality apprenticeship schemes and more work experience opportunities for people over 25. Systemic liaison with education partners is essential to ensure fitness for purpose and benefits for all parties.

Response to questions:

1. What are businesses doing to identify and address the training and development needs of their workforce over the age of 25?

The Skills Survey highlighted that businesses see the need to upskill and reskill their workforce to succeed commercially in times of rapid technological development. Only 20% of employers expect the supply of engineering and technical skills to improve in the next three to five years. This is too low to meet industry needs.

Training existing staff is a tangible and direct way for businesses to tackle internal skill gaps, and meet the challenges of:

- the chronic shortfall of people starting out in engineering careers
- retaining skilled and experienced staff, who may be approaching retirement
- the current tight job market and the costs of recruitment
- ensuring staff have the right skills for the role – 73% of companies surveyed were concerned about the lack of workplace skills in new recruits.
Companies that have arranged or funded training over the last 12 months most commonly used external training organisations (81%) and their own training departments or other employees with specialist knowledge (69%). More than one in three companies used FE colleges to delivery training (37%), while universities were used by just 17% of companies. As company size increases, the use of all the above sources rises. 53% of companies with 250 or more employees have linked up with universities, compared with just 14% of companies with less than 25 employees.

2. **How are businesses planning for future skills needs that may result from changes in technology and processes, such as automation, robotics and artificial intelligence? Over what timescale?**

One way in which engineering and technology businesses, particularly larger companies, plan for future skills needs and keep abreast of emerging technology is by working more closely with universities to develop courses that create more work-ready engineers. The IET has undertaken research with the Engineering Professors Council (EPC) on such business-academia links. Its findings are detailed in our 2019 *New Approaches* report. The document highlights the six areas below where some higher education institutions are working effectively with business so as to:

- **Incorporate more creativity into engineering** – this is to reflect developing industrial needs and to attract a broader range of applicants
- **broaden the diversity of students** – the aim is to attract more women and ethnic minorities, liaising closely with schools and parents earlier, to dispel outdated assumptions about engineering
- **focus particularly on project work** – this provides authentic, relevant engineering experiences and generates real-life solutions
- **engage with academia in design and delivery** – this can enhance transferable and employability skills
- **combine academic and significant workplace opportunities** – this will help students bridge the gap between academic and vocational worlds, creating benefits for both parties
- **develop courses with greater interdisciplinarity** - modern engineering challenges and diverse technological developments are solved by teams across engineering and non-engineering disciplines, bringing together varied skills and expertise to create innovative solutions.

Whilst much good practice is being carried out by particular institutions and businesses, it is not being done on a systemic, joined up basis across the UK. This is a current and chronic issue that needs managing so as to generate synergies and mutual benefits, drawing on the expertise and experience of both parties.

3. **Please share examples of best practice, and case studies, for business investment in training, upskilling and reskilling the workforce. What are the factors that make these examples so successful? What has been the impact of this investment? We are particularly interested in hearing what businesses are doing to support:**

   a. **People with low levels of literacy, numeracy or basic digital skills**
b. **People with qualifications at a level typically gained at school by age 16**

No comment

c. **People with qualifications at an intermediate or higher level, typically gained since leaving school**

Businesses need to define their competency requirements, and the underpinning knowledge and understanding criteria to support the development of their people. This will also support corporate growth and prosperity. Competency framework definition and delivery can be done in conjunction with the FE and HE sectors, combining classroom and work-based learning.

In the fields of engineering and technology, professional registration is a good example of how companies and the professional engineering institutions can help develop an individual's potential. People may start at ONC/HNC/HND level, and via professional registration, work towards EngTech, IEng and CEng qualifications, developing their workplace capabilities at the same time.

Businesses often complain that students aren’t ‘industry-ready’. Liverpool John Moores University (LJMU) has designed a two-year MSc programme with one year spent in industry so that students can learn the techniques and day to day challenges of industry. This focus has proved successful in enabling students gain skills and experience quickly in a safe learning environment, whilst allowing for innovation and risk-awareness. It provides a platform to support students’ progress to large, complex projects quickly in their careers. To help activity-based learning, LJMU has also incorporated a module of soft skills (e.g. creativity, leadership). Mediation is included to make students aware of their level and the skills they should be working on.

4. **What would incentivise businesses to invest more in workplace training?**

Businesses will invest more in workplace training if they see the commercial benefits of doing so, in terms of such measures as increased productivity, capacity, competitive advantage, growth or profitability. A lack of development at times of rapid technological change (e.g. Industry 4.0, AI, digital twin) could see businesses fall behind competitors.

Worryingly, the 2019 Skills Survey reported gaps widening at all skills levels in engineering and technology since 2017. This could indicate a reduction in business confidence, which could have knock-on effects for future economic growth. Some key examples over that period are:

- the skills gaps of apprentices and young trainees rose from 30% to 48%
- skills gaps at professional level (including degrees) rose from 46% to 57%
- gaps at technician / skilled craft level rose from 61% to 73%

This demonstrates a clear need to encourage and support more employers, especially SMEs, to invest time and resources in providing more skills training and work experience opportunities.
When companies that employ apprentices were asked what initially triggered them to take apprentices on, teaching skills to people was the most common reason (34%), followed by the need to address skills shortages (27%). Other reasons included addressing gaps resulting from an ageing workforce and building a workforce with the necessary skills and ways of working specific to the organisation.

The 2019 Skills Survey stated that most companies that are liable to pay the apprenticeship levy reported that they are using it. 48% of these reported that it was easy to use, but 43% reported that it was difficult, or neither difficult nor easy. This area needs exploring to ensure the levy is as easy and streamlined as possible to manage, so as to incentivise company use. One option is for government to give employers greater flexibility on spending for skills development, relaxing restrictions on the deployment of unused apprenticeship levy funds and supporting alternative, high-quality training options.

Government can play a significant role in incentivising investment through its policies and regulations. It can also facilitate the building and nurturing of a joined-up and wider ecosystem of support. The IET’s report Bridging the Innovation Gap recognised the value of Government-backed schemes such as UKRI, Nesta and the British Business Bank, alongside numerous industry-specific schemes, networks and fiscal initiatives. To incentivise business investment, such funding and support needs to be strategically targeted towards growth companies. This will enhance the potential for economic prosperity.

It is also important to keep a strong focus on regional initiatives, and to reduce regional disparities between the south east / east of England and the remainder of the UK. Using some of the additional R&D spending that the Government has pledged, and spreading it more evenly across the country, would help increase business confidence, and support for business development. This in turn should incentivise business to invest more in training. Our ‘Bridging the Innovation Gap’ report demonstrates that the resultant benefits for productivity, employment and the UK economy could be significant.

5. **How can local government, training providers, Chambers of Commerce and other partners at a local level work together to improve workplace training and development? Where are there examples of best practices?**

Business partnerships with academic institutions are highly effective ways of developing a greater range and network of flexible, individually tailored and innovative approaches to staff development, as detailed in the response to Q2. They are beneficial ways of upskilling and reskilling technical staff to meet industry needs and keeping abreast of emerging technology. This is particularly useful for small and medium sized enterprises (SMEs) where resourcing pressures, capabilities, dedicated staff, size or location may preclude traditional training and development routes.

Culture and networking are also often overshadowed by skills needs. Academia has a role in engaging with society. However, it’s a challenge for FE and HE colleges to foster relationships with big companies and SMEs- and vice versa. To take advantage of opportunities systemically, all such academic and public sector bodies should be encouraged to appoint ‘business champions’, tasked with strengthening joined-up relationships and initiatives with businesses. This may lead to strategic partnerships with significant commercial, skills and societal benefits for all parties.
Using our extensive networks of engineering employers (SMEs and large corporates) and academic partners, the IET would welcome the opportunity to convene a session for the British Chambers of Commerce with our engineering employers to hear first-hand examples of best practice and issues.

6. **What change in government policy (UK and/or devolved) could make the biggest difference to business investment in training and development?**

Several recommendations have been listed in previous questions. Overall, the aim of investment in training and development is to engender business confidence with a view to increasing productivity and UK economic prosperity. Key recommendations are summarized below:

- **Investment by employers in skills is strongly linked to overall business confidence and their willingness to invest for the long term.** It correlates with companies’ willingness to invest in R&D to grow their business over time. Government policies should work to enhance existing support for businesses, to ensure that a systemic, joined-up and wider ecosystem of support is available, especially for SMEs. Such funding and support need to be strategically targeted towards growth companies, so as to incentivise business investment and growth.

- **Policy needs to work to reduce disparities in regional investment between the south-east / east of England and the remainder of the UK, whilst respecting commercial realities.** Focusing more R&D spending and support outside the south-east can act as a catalyst for increased business confidence and investment in such area.

- **Government should encourage all academic and public sector bodies to invest in ‘business champions’, to strengthen joined-up relationships and initiatives with businesses.** This may lead to strategic partnerships with significant commercial, skills and societal benefits for all parties.

- **The government is introducing T levels, which is welcome.** However, this policy needs to be backed up with awareness campaigns, both to industry and to academia. In particular, the parity between T levels and A levels needs to be communicated and understood, to give confidence to all parties of the value and credibility of the qualifications. The requirement of a 45-day work placement likewise needs to be communicated and supported.

- **The Government should ensure that the apprenticeship levy is as easy and streamlined as possible to manage, so as to incentivise company use.** It should introduce greater flexibilities for employers around spending for skills development, relaxing apprenticeship levy restrictions and supporting alternative, high-quality training options.

7. **What changes in the existing education and skills system would better support business investment in workplace training?**

According to our survey, 81% of businesses agree that they have a responsibility to support the transition from education and training into the workplace, to get people with the right academic and technical skills.

Recent government policy recognises the need to boost workplace training. 2020 will see the launch of T Levels - new qualifications combining classroom learning and a compulsory 45-day industry placement. These will provide students with an opportunity to develop their technical skills in a role directly relevant to their vocational course. The aim is clear, to help students gain the right skills to meet industry needs. However, this approach is heavily dependent on industry engagement - only 28% of companies are aware of the work
placement requirement. Only 59% state that they have the capacity to offer work experience as part of T levels. A low intent from companies to get involved and offer an industrial placement (43%) may make it difficult to deliver T levels successfully. This figure could be significantly increased through dedicated awareness strategies about T levels for employers (especially SMEs) – especially focusing on the work placement requirement. Otherwise, the potential of this new opportunity for individual skills development will be lessened.

It is also essential that the parity between T levels and A levels is communicated clearly and repeatedly from government to academia (schools, FE and HE), parents and students. An awareness and understanding of the clear and rewarding career paths that are available, developing and diversifying at all levels will help to give confidence to all parties of the value and credibility of these new qualifications.

8. **What lessons can we learn from other countries?**

No comment