

EngineeringUK's written evidence to the Youth Unemployment Committee Inquiry (May 2021)

Young People and Covid-19

1. Covid-19 continues to have a major impact on education and skills opportunities for young people and the effects are likely to be felt for some time to come. This is evident across the learning landscape - from the cancellation of exams through to the reduction in apprenticeship opportunities. The pandemic looks likely to exacerbate existing inequalities in our education system, which in turn will have an impact on the career opportunities available to young people.
2. The results from our 2020 'pulse survey' highlight some of the concerns young people have about the future¹. **62% felt that finding a job in the future has become more difficult due to the pandemic.** 52% felt that going to university has become more difficult and 41% felt that becoming an apprentice has become more difficult. **44% felt that, when considering career choices, 'having a job you can be certain to keep' had become more important to them due to the changes brought about by the pandemic.**

Careers provision in schools and colleges

(Inquiry questions 5 & 6 – Is careers education preparing young people with the knowledge to explore the range of opportunities available? Does the national curriculum equip young people with the right knowledge and skills to find secure jobs and careers?).

3. At EngineeringUK we believe that supporting young people in their careers choices and equipping them with the tools to access those choices is a win-win situation. It ensures that young people can take up the employment opportunities on offer and at the same time secures the future workforce needed for net zero, economic growth and levelling up. It is also important that careers advice and guidance is based on good-quality, up-to-date information on the labour market, helping young people to benefit from new and emerging job opportunities in sectors such as engineering.
4. EngineeringUK, together with a range of leading bodies in the fields of STEM and careers, is due to publish a report shortly² drawing on **findings from a survey of around 200 teachers and careers leaders in secondary schools and colleges in England** as well as on relevant literature and evidence. The report examines the ability of schools and colleges to deliver STEM careers provision in light of the pandemic and beyond. We would be very happy to brief the committee on the report in more detail once it is published. In the meantime, we are able to share some of our key findings below, as well as our policy recommendations.

Key findings

5. Schools and colleges which took part in our research reported experiencing various challenges with delivering comprehensive careers provision to young people. **70%** of respondents said that lack of staff time was a barrier to delivering STEM careers provision. **46%** of respondents said that 'lack of funding for STEM careers provision' affected their school's ability to deliver STEM careers provision.
6. When asked how, if at all, the Covid-19 pandemic has caused challenges for careers provision at their school, **91%** of respondents said, 'lack of opportunity to organise in-person visits' and **86%** selected 'lack of opportunities to organise work experience'. A further **76%** told us that it had

¹ EngineeringUK. 'Young people and Covid-19: How the pandemic has affected careers experiences and aspirations', 2020.

² EngineeringUK. 'Securing the Future: STEM careers provision in schools and colleges in England', due for publication May-June 2020.

become 'more difficult to engage with employers'. **49%** of respondents said that pupils not being able to access online or virtual careers provision due to lack of technology or internet at home was a barrier.

7. Insights from our survey suggest that for a variety of reasons many schools and colleges offer STEM careers education as an extra-curricula activity, with participation being optional and for a small group of pupils rather than available to all. Some schools and colleges taking part in our research highlighted the potential issues associated with offering 'opt-in' STEM careers activities, which can tend to attract those pupils with an existing interest in STEM. One of our case studies also illustrates an example of where participation in STEM careers activities is directly linked to subject choice (e.g. STEM careers activities are targeted at those taking triple-science at GCSE).

Policy recommendations

1. We ask the government to urgently publish a **new careers strategy** for England.
2. We ask that **careers hubs** are rapidly expanded to cover all secondary schools in England by mid-2022.
3. We recommend that there is a **dedicated STEM leader** within each careers hub.
4. We recommend that government provide additional funding in the region of **£40 million** to support careers activities in schools.
5. We ask that the government urgently develops a fully funded **digital learning strategy** for schools.
6. We ask that the government **embeds careers** into the subject content of **the STEM curriculum** and ensures that it highlights the diverse range of roles and people in science and engineering.
7. We ask that **teacher training and continuous professional development** includes information and training on STEM careers, including careers in modern engineering.

Engineering and the economic recovery

(Inquiry question 12 – What economic sectors present opportunities for sustainable quality jobs for young people? How can we ensure these opportunities are capitalised on and that skills meet demand, particularly for green jobs?).

8. The UK needs a thriving engineering sector to become the green science and engineering superpower that the government wants to build and to support post-pandemic economic growth. In 2018, before the pandemic, the engineering sector generated 21.4% (£1.2 trillion) of the UK's £5.7 trillion turnover³, and although the pandemic has had an impact on its growth in the short-term, the engineering sector has the potential to be a major contributor to UK economic growth going forward.
9. The UK also needs the engineering sector to be more diverse to enhance our collective ability to solve some of the largest social and economic challenges facing the UK. Women make up just 12% of the engineering workforce⁴. Those from minority ethnic backgrounds comprise 9% of the workforce⁵. In order to change this the focus must not only be on the current workforce, but on the future and on the many young people who, with the right education, training and access to careers guidance and information might become those engineers that help deliver the sustainable economic growth that this country desperately needs.

³ EngineeringUK. 'State of Engineering', 2018 (updated figures: <https://www.engineeringuk.com/media/156186/key-facts-figures-2019.pdf>).

⁴ EngineeringUK. 'Gender disparity in engineering', Research Briefing, 2018.

⁵ EngineeringUK 'Social Mobility in engineering', Research Briefing, 2018.

Skills and the green economy

(Inquiry question 12 – What economic sectors present opportunities for sustainable quality jobs for young people? How can we ensure these opportunities are capitalised on and that skills meet demand, particularly for green jobs?).

10. As part of the global race to address the climate change crisis, the UK has committed to achieving net zero by 2050. However, we cannot get there without a skilled and diverse engineering workforce able to design, create and deliver the green innovations needed to reduce carbon emissions. With the government focus on developing the UK as a leader in science and net zero, careers in engineering can offer young people not only good quality jobs but also a chance to make a difference.
11. We know that engineering skills are in high demand across many sectors, particularly in the context of the green recovery. According to a survey by the Institution of Engineering and Technology⁶, 93% of engineering companies in the UK with a sustainability strategy say they do not have the skills needed to fulfil it. Their report also finds that among engineering employers currently experiencing a skills gap or limitations in their workforce, engineering skills is where they are seeing the greatest skills gap, with one in two (53%) reporting this.
12. The UK energy sector also reports⁷ that it will need to fill 400,000 roles over the next thirty years in order to reach net zero, 260,000 roles of which will be newly created. Similarly, the rail sector reports⁸ that up to 120,000 extra workers will be needed over the next 5 to 10 years, with demand for skills peaking around 2025. Demand for skills is further exacerbated by an ageing workforce. One fifth of people currently working in the energy sector are set to retire by 2030 as the ‘Baby Boomer’ generation reaches pensionable age⁹ and over 28% of workers in the current rail workforce are over the age of 50¹⁰. Ongoing skills gaps across sectors such as energy, transport and infrastructure (including engineering skills) could have serious consequences for the UK’s net zero ambitions. With this in mind, we support the National Engineering Policy Centre’s call¹¹ for a net zero skills plan and we look forward to seeing how the government’s Green Jobs Taskforce will help to drive forward more green apprenticeship and training opportunities for young people in the engineering sector.

About EngineeringUK

13. **EngineeringUK is a not-for-profit organisation, which works in partnership with the engineering community to inspire tomorrow’s engineers and increase the number and diversity of young people choosing academic and vocational pathways into engineering** via programmes designed to excite young people about the variety and opportunity presented by a career in modern engineering. EngineeringUK aims to grow the collective impact of work across the sector to help young people understand what engineering is, how to get into it, and be motivated and able to access the educational and training opportunities on the way.
14. We also undertake research and work with partners in the engineering sector to influence government thinking in relation to the educational pipeline into engineering, and what systems, structures and funding need to be in place to enable all young people to decide whether a career in engineering is for them.

⁶ The Institution of Engineering and Technology. ‘[IET skills for net zero and a green recovery 2020 survey](#)’, 2021.

⁷ National Grid. ‘[Building the Net Zero Energy Workforce](#)’, 2020.

⁸ City & Guilds and the National Skills Academy for Rail (NSAR), ‘[Back on Track](#)’, 2020.

⁹ National Grid. ‘[Building the Net Zero Energy Workforce](#)’, 2020.

¹⁰ City & Guilds and the National Skills Academy for Rail (NSAR), ‘[Back on Track](#)’, 2020.

¹¹ National Engineering Policy Centre. ‘[Engineering a resilient and sustainable future](#)’, 2020.