Dear Sir/Madam,

The IET’s response to the Call for Evidence for the Education Select Committee on ‘The Impact of COVID-19 on Education and Children’s Services’

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.

We would be happy to discuss our response in more detail and provide examples and evidence from our extensive networks of engineering employers and academic partners. Please feel free to contact us to arrange this.

Answers to questions:

4) The effect of cancelling formal exams, including the fairness of qualifications awarded and pupils’ progression to the next stage of education or employment.

Cancelling formal exams could affect attainment. The guidelines of schools examining student achievements over the course of their education, such as mock exams and other assessments, could lead to false results. Disadvantaged children are more likely to not have adequate support and tuition while schools have been closed. Limited access to technology could also widen the gap. Outstanding students in disadvantaged schools could also be under-awarded because the school must show an increase in progression which relates to previous years. This system will not be adequate for all year groups and there is evidence to suggest that it will disproportionately underestimate the achievements of BAME students.

Subjects which require a practical element, e.g. lab work and design and technology, may suffer to a greater extent. Even if there is no formal assessment, these are key skills which need to be practised. These subjects can be the foundation for courses such as engineering and could disproportionately lead to fewer vocational educational courses. Considering the key role engineering and technology is playing in addressing the challenges of COVID-19 and will do in rebuilding the economy this reduced level of skills would be an unfortunate consequence.

If students are unhappy with their results, they will be able to resit them in the next academic year. Nevertheless, this could prevent able students from taking up their
preferred HE courses, or harder courses or force a gap year when approaching A-
Levels, T-Levels or equivalent.

In lieu of careers advice, there could be an opportunity for encouraging students to
research careers and opportunities independently. However, if disadvantaged
children are not supported at home, this could put them at further disadvantage.

There should also be an emphasis of how digital can work for different age groups.
Young children, for example, play games to earn points or rewards and often crave a
lot of attention. This must be replicated as much as possible using a digital platform.

5) Support for pupils and families during closures, including:
   a) The consistency of messaging from schools and further and higher
      education providers on remote learning

Unfortunately, there is a large divide on messaging from schools, FE and HE
providers on remote learning. There is a larger gap in students who can remote
learn.

Some institutions have taken good steps and prepared for a crisis like this. Some
schools and FE have provided all students with laptops and tablets to ensure they
can access materials to help with remote learning. In contrast, some institutions have
provided very little guidance, such as asking remote learners to look at websites
such as the BBC. There is also a wide variation in between these extremes.
Generally, disadvantaged schools, or those in disadvantaged areas, provide less
ability for students to remote working. This may be because they are less able to
provide the infrastructure, more focused on behavioural issues or do not trust
students – or the social situations of where students come from – with the
infrastructure.

It is also the case that some students do not have access to digital infrastructure
(such as a laptop, tablet, phone, or some way to connect to remote learning), or
there is limited digital infrastructure within the house, with parent’s work taking
priority. Although the Government will provide laptops to households without one
with students in Year 10, and 4G internet to many disadvantaged students, this
scheme must be expanded to all students in the UK without constant access to
digital infrastructure throughout the school day.

This scattered approach has seen a differing number of students attend classes and
doing homework. The Sutton Trust have found that approximately 23% of children
are taking part in live and recorded lessons each day, but this varies dependent on
income. Middle class homes are reporting a 30% participation rate, compared to
16% of pupils in lower class backgrounds. 57% private school secondary school
pupils have accessed lessons at least once a day, in comparison. 1 60% of private
and 37% of state pupils in affluent areas already had an online platform to receive
work compared to 23% in the most deprived schools. 2 The regression rate of

disadvantaged children will be exacerbated by a lack of digital support and infrastructure in this time.

c) The effect on apprenticeships and other workplace-based education courses

As previously stated, there will be a disproportionate harm to hands-on and workplace-based education courses in general. Some engineering firms will be able to practice safe distancing whereas others will not. Overall, this will reduce the level of skills that will be developed. According to the IET’s skill survey last year, 60% companies report the recruitment of engineering and technical staff with the right skills was the biggest anticipated barrier to achieving medium-term business objectives and this experience will only exacerbate this problem.

The Government must work with industry to work out a plan to recover this lost time and ensure skills are learned and protected by students. An approach involving academia (HE, FE and schools), industry partners (and their supply chains) and the Government could ensure that these skills are not lost due to COVID-19. It could also cover a foundation knowledge for some students and pave way for good practice in the future of learning.

Furthermore, Government should encourage more businesses that pay the Apprenticeship Levy to use it effectively, bringing young people into the work environment, teaching them practical skills. 71% of engineering companies that are liable to pay the Levy have brought in apprentices to teach them practical skills. In subsequent years, 23% have increased the number of apprentices they have taken. Government should financially encourage these companies to increase the number of Apprentices they take on each year.

The Government must also be clear about the practical implications of COVID-19 on T-Levels. T-Level qualifications are awarded after academic study and practical work experience of at least 45 days is covered. Will T-Levels still be offered in September for students who wish to study them? If not, then this will further delay key skills the economy needs. If it continues, how can these key skills be taught safely and practically? Will the review on T-Levels be fair in, incorporating the pandemic into its findings? It would be unwise to edit or close the programme based on COVID-19 figures. Government should work with industry and academic partners to ensure this is in place before September.

Nevertheless, the IET welcomes the Prime Minister’s promise to review the concept of an ‘apprenticeship guarantee’ for every 16-25-year-old in the UK. This would provide a real opportunity to plug the skills gap in areas such as engineering.

For Engineering and Technology, Government should work with industry and academic partners to teach digital skills. This will enable more practical and academic learning to be done from outside of the office, ensuring that these skills do not get lost during crises such as this. This can be done in a variety of ways, including encouraging more companies to take on more apprentices and
incentivising HE and FE to develop short, skill-gap focused learning opportunities in which industry can work with HE and FE to shape these ideas.

When these workplaces do return, all students should be provided adequate PPE. There must be an awareness that people who fit into ‘shielding’ groups may not receive the skills they need to.

7) The effect on disadvantaged groups, including the Department’s approach to free school meals and the long-term impact on the most vulnerable groups (such as pupils with special educational needs and disabilities and children in need)

One of the least studied, but potentially most important, attainment gaps is during school holidays.\(^3\) Research suggests that summer holidays are so long there may be a learning stagnation or learning regression which particularly pronounced on lower-income families.\(^4\) This is in contrast to during term time, where children of all ages learn at roughly similar paces, despite income background.\(^5\) This can be contributed to a number of reasons, less time to talk to children about their studies, a lack of interest in education, or a lack of money on books, pens and digital devices.

This answer does not focus on school holidays but makes the comparison with the time that pupils have had out of school since schools were shut because of COVID-19. During this closure period, or subsequent closures due to future pandemics, digital infrastructure can prevent regression and curb the long-term impact on vulnerable children.

This regression could be solved with a major expansion of digital infrastructure. This would also require making sure pupils, and teachers, have access to appropriate and flexible hardware and software to teach stimulating and interesting lessons.

In late April, the UK Government announced plans to support disadvantaged children in England during the COVID-19 pandemic. These children include care leavers, children with social care worker support and year 10 pupils who do not have devices already. Disadvantaged children will be able to borrow a laptop and 4G routers, with data costs waived for educational sites. Wales has introduced a similar scheme for a ‘digitally excluded learner’ during COVID-19.

This is a good start, but it is vital that this level of support is available for all school children from disadvantaged backgrounds so that the attainment gaps are not exacerbated. The definition of ‘disadvantaged’ must be widened to support a greater level of students including those with limited devices in their households. Children who live in a family with one device may not get priority access to that device during the day, forcing them to choose between learning at night or not at all. Parents and teachers should also be provided with basic digital skills to ensure each learner gets

\(^3\) [https://journals.sagepub.com/doi/pdf/10.1177/0907568218779130](https://journals.sagepub.com/doi/pdf/10.1177/0907568218779130)


the most out of their lessons. No child should be prevented from learning or face regressing throughout this pandemic because we can and should support them.

8) What contingency planning can be done to ensure the resilience of the sector in case of any future national emergency?

More digital infrastructure is necessary to be prepared for the future. As stated previously, this needs to be expanded across all age groups and backgrounds. This will help mitigate future national emergencies and stop the attainment gap from growing.

With children heading back to school at different rates in all four nations of the UK, it is imperative that the right level of digital infrastructure exists to allow adequate learning whilst being in the classroom part time and being at home for the rest of their learning.

There should also be continued support for teachers to prepare to deliver and teach digitally during this epidemic. A range of courses must be available to ensure reward, fulfilment and the feeling of supervision and guidance which can call be accessed digitally. Schools and other institutions must be prepared for whatever lies ahead.