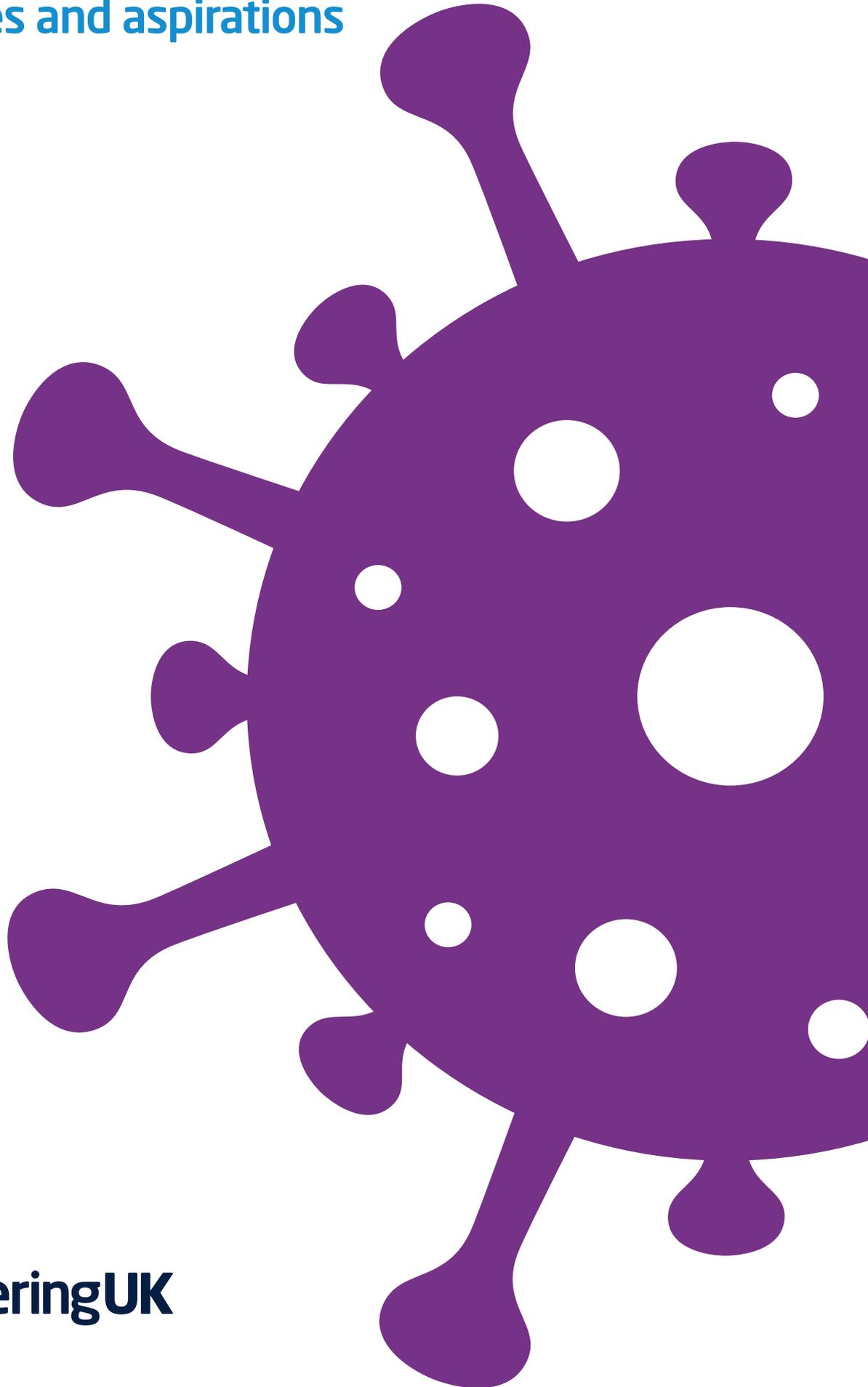


Young people and Covid-19:

How the pandemic has affected careers experiences and aspirations



Summary

Our survey of 11 to 19 year olds revealed that for many young people the pandemic has raised concerns about what the future may hold and the opportunities that may be available to them. It has also affected the factors they now consider important in making career decisions.

For example, many respondents were concerned that going to university, becoming an apprentice, and getting a job has become more difficult as a result of the pandemic. Given this – perhaps unsurprisingly – job security and availability were factors commonly reported by young people as being more important in their career decisions since the pandemic. We also found that for some young people, particularly girls/young women, the pandemic has raised the importance of having a job that would enable them to make a positive societal contribution or help people.

Encouragingly, we found that the pandemic has resulted in young people being more interested in a career in STEM. However, interest in engineering careers is lagging behind careers in science and technology – despite young people on the whole being aware of the role that engineers have played in efforts to combat the pandemic.

Our survey has also provided insight into what and to what extent young people have been accessing careers activities and STEM engagement activities during lockdown. Our results show that while young people have sought out careers advice, this has predominantly come in the form of searching for information online or speaking to parents, with under a quarter having taken part in any formal careers education during lockdown, of which less than half was STEM-related.

We make the following recommendations based on the findings:

1. **The government must ensure that young people have access to education, training, jobs and work placements in STEM.**
2. **The government and organisations involved in STEM and STEM inspiration must do more to highlight how a career in STEM – and particularly in engineering – contributes to improving society.**
3. **In its review of the existing careers strategy, the government must focus on ensuring that all young people, whatever their background, have access to good quality, formal STEM careers activities and advice.**

Introduction

The Covid-19 pandemic has significantly affected all aspects of life, from public health to the economy. Students of all ages have had their education, work and careers experiences, and exams disrupted, and there is talk of the deepest recession the UK has seen for 300 years,¹ with the impact of this predicted to hit young people particularly hard.²

At the same time, the coronavirus pandemic has brought into sharp focus the vital role that the STEM sector plays in tackling the big challenges we face as a society. Young people have seen and heard of scientists and engineers racing to develop a vaccine to help end the pandemic and to design and build ventilators.

It seemed likely that how young people feel about the future and their careers choices has changed rapidly since the pandemic began. To understand these changes, EngineeringUK commissioned Ipsos MORI in July 2020 to undertake a survey of over 1,100 11 to 19 year olds to gauge their attitudes and the degree to which their educational and career aspirations have been affected by the pandemic – the key findings of which are outlined in this briefing.

¹ Financial Times. 'BoE warns UK set to enter worst recession for 300 years' [online], accessed 05/08/2020.

² Resolution Foundation. 'Class of 2020', May 2020.

About the survey

The survey sought to better understand:

- The factors important to respondents when considering which type of career they might choose – and whether these had become more/less important as a result of the pandemic
- How the pandemic has changed how respondents feel about their career choices, job prospects, and available educational routes
- The extent to which respondents would find certain sectors/jobs appealing to work in and whether this has changed as a result of the pandemic
- How important they perceive engineers to be in various efforts to combat the pandemic
- What could help respondents better understand the careers they are interested in
- Participation in careers activity since lockdown

Information about respondents' age, gender, and social grade was collected to enable further analysis by these characteristics.

Key findings

Impact on future prospects and plans

A belief that the pandemic will adversely affect the educational routes and job opportunities available came across strongly in our results.

- Concerns over future prospects were common, with 62% of young people surveyed agreeing or strongly agreeing that finding a job in the future has become more difficult.
- Among 15 to 19 year olds who were asked the question,³ there was also concern that going to university or becoming an apprentice would become more difficult to pursue as a result of the pandemic (with 52% and 41%, respectively, agreeing or strongly agreeing with these statements).

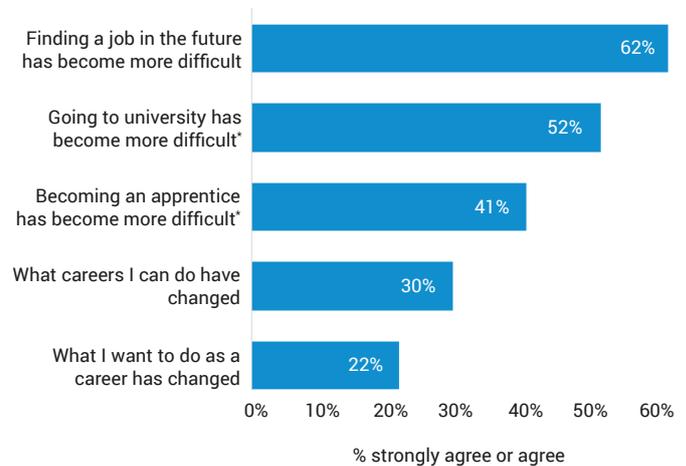
Impact on career considerations

Our findings suggest that some young people felt their career choices had been constrained because of the pandemic, whilst for others what they wanted to pursue had changed as a result. It was clear that the pandemic has affected young people's career considerations, in particular elevating the importance of job opportunity and security. For some, the pandemic also appeared to raise the importance of having a job that enabled them to make a positive societal contribution.

- 30% said what careers they *could do* had changed as a result of the pandemic, and 22% said what they *wanted to do* as a career had changed.
- Over 2 in 5 young people surveyed report that the pandemic had made 'having a job that you can be certain you can keep' (44%) and 'availability of jobs' (41%) more important to them when considering career choices.
- Around a third of respondents indicated that the pandemic had made 'having a positive impact on society' (36%), 'helping people with the work they do' (34%), and 'ethics and social responsibility' (33%) more important when considering career choices.

Figure 1 Impact of the pandemic on young people's career plans and considerations

How much would you say you agree or disagree that the coronavirus pandemic has changed how you feel about the following?



* Only 15 to 19 year olds were asked whether going to university or becoming an apprentice had become more difficult. All other questions were posed to the entire 11 to 19 sample.

³ Base: 541 respondents aged 15-19 in the UK

Awareness of engineering’s role in efforts to address the pandemic and consideration of a career in the profession

One hypothesis the survey sought to test was whether the pandemic may have increased interest in engineering among young people, given its key role in efforts to combat Covid-19. Encouragingly, awareness was relatively high, with the majority of respondents recognising engineering’s role in efforts to mitigate the pandemic.

- Asked how important or not they thought engineers were to a range of pandemic-related efforts, at least three quarters of respondents felt engineers were very or fairly important to developing new ventilators (85%), keeping us connected (78%), and turning exhibition centres into hospitals (75%).
- A lower proportion – but nevertheless a majority – saw engineers as being very or fairly important to developing coronavirus tests (60%) and working on a possible coronavirus vaccine (53%).

However, our results suggest that the pandemic has not translated into a large upswing in the likelihood of young people choosing a career in the profession.

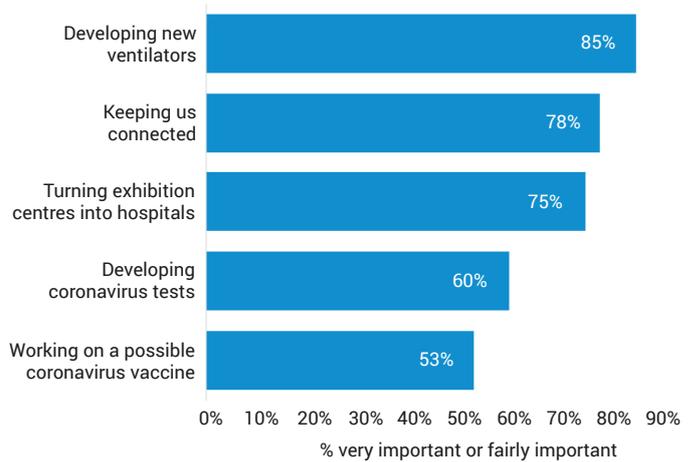
- Asked whether the pandemic had made them more or less likely to choose a career in a range of areas, 14% said they were more likely to choose a job in engineering – counterbalanced by 10% saying they would be less likely.

Those who said the pandemic had made them more likely to choose a job in engineering⁴ were given the opportunity to elaborate as to why in an open text box.

- Respondents most commonly cited a discovered passion/ interest in the profession (31% of open text responses) followed by the profession’s ability to help people and society (23%), the job security the profession offered (21%), the nature of the profession, such as being well-paid or practical (11%) and the opportunity for personal development, such as to develop skills of interest (7%).

Figure 2 Awareness of engineers’ role in efforts to address the pandemic

How important or not do you think engineers are to the following?



⁴ Base: 169 respondents aged 11-19 who said the pandemic had made them more likely to choose a job in engineering

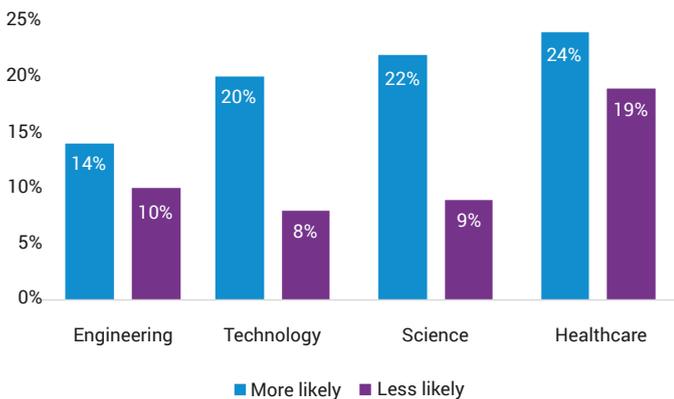
Consideration of other careers

The proportions of young people saying they were more likely to choose a job in technology or science as a result of the pandemic were higher than for engineering. The pandemic seems to have had a polarising effect on the appeal of healthcare as a career choice, although there was an overall increase.

- 22% of young people surveyed reported that the pandemic had made them more likely to choose a career in science (compared with 9% who said it made them less likely), and similar proportions said the same of technology (20% more likely, 8% less likely).
- 24% of young people surveyed said they were more likely to choose a career in healthcare, offset by 19% saying they were less likely.

Figure 3 Impact of the pandemic on young people’s likelihood of pursuing a career in engineering, technology, science and healthcare

Thinking about your career options, has the pandemic made you more or less likely to choose a job in the following areas?



Participation in careers activity

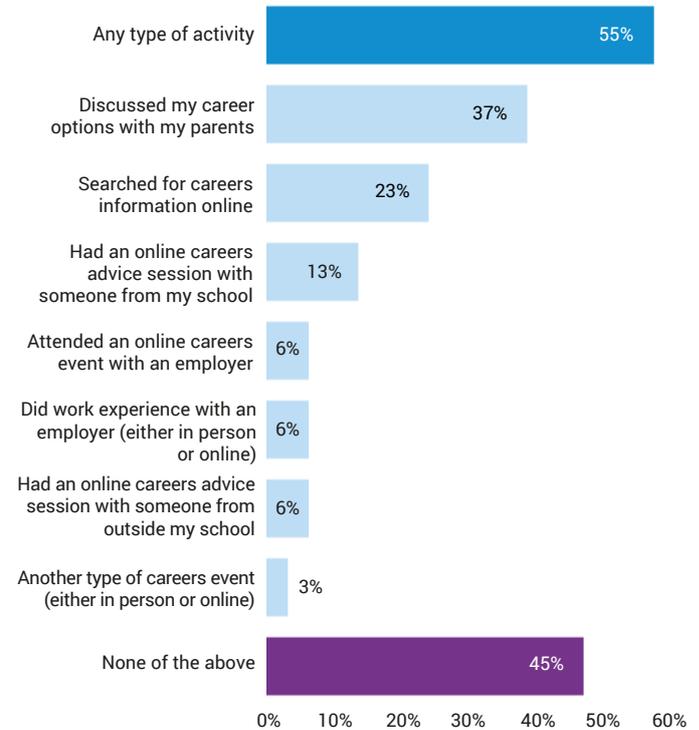
The extent to which the young people surveyed had been able to take part in career activities since March 2020, when lockdown was imposed, was also explored.

- Encouragingly, the majority (55%) of young people reported that they had taken part in some type of careers activity between March and July 2020. However, this activity was largely in the form of discussing career options with parents or searching for information online. Of those who reported having taken part in a careers activity, 67% had discussed career options with their parents and 41% had searched for careers information online.

Just 24% of young people surveyed had taken part in any type of formal careers activity – that is, attending an online careers advice session via their school or outside of it, an online careers event with an employer, work experience, or another type of careers event.

Figure 4 Participation in career activity between March and July 2020

Since schools closed down in March 2020, have you taken part in any of the following?



Percentages taking part in each careers activity do not add up to the total taking part in any careers activity as respondents were able to select multiple options.

- Amongst those who have taken part in any careers activity, 63% said at least one activity was related to careers in science, technology, engineering and maths (STEM), and of those STEM activities 38% can be classed as formal careers activities. Furthermore, just 14% of all STEM activities were employer-led (including an online careers event with an employer or doing work experience with an employer).

It was clear that young people would welcome greater access to formal careers activity, especially employer-led engagement.

- When asked what could help them better understand what careers they are interested in pursuing, respondents most commonly cited greater employer engagement such as work experience, job fairs, site visits, advice from those in the profession and internships (19% of open text responses). This was followed by more information, advice and guidance in the school environment (e.g. careers days 15%) or online (10%), and access to ‘expert’ advice (5%).
- Young people also expressed a desire for more information about what exams or qualifications they needed in order to pursue a career and access to labour market information, such as what a job entailed and how much they could earn in certain professions.
- More generally, the young people we surveyed expressed a need for information, advice and guidance to be accessible, clear, concise and relevant.

Figure 5 Impact of the pandemic on the importance of career choice factors, by gender

To what extent, if at all, have changes brought on by the pandemic made each of the following factors more or less important to you when considering career choices?

	Male				Female			
	More important than before	About the same as before	Less important than before	Don't know	More important than before	About the same as before	Less important than before	Don't know
Liking what I do	29%	64%	3%	4%	37%	59%	3%	2%
Being paid well	31%	61%	4%	4%	34%	60%	2%	4%
Having ethics and social responsibility	31%	60%	3%	6%	35%	58%	2%	5%
Being appreciated by those around you	23%	68%	5%	4%	29%	64%	3%	3%
Being treated fairly	30%	63%	2%	5%	38%	60%	1%	2%
Having a positive impact on society	30%	60%	3%	6%	41%	53%	3%	4%
Helping people with the work you do	29%	64%	2%	5%	38%	57%	2%	3%
Having a job that you can be certain you can keep	38%	55%	2%	5%	50%	44%	2%	4%
Being able to progress in your career	26%	67%	3%	4%	26%	66%	4%	3%
Having different types of jobs to choose from	23%	68%	5%	4%	24%	67%	6%	4%
Availability of jobs	37%	55%	3%	5%	46%	49%	2%	3%

Gender differences

There were often significant differences between male and female respondents⁵ in their survey responses. For example, girls/young women tended to place higher importance on factors related to societal contribution and social responsibility than boys/young men – and to say that that they had become even more important to them as a result of the pandemic.

- Female respondents were even more likely than male to say 'having ethics and social responsibility' (89% vs 80%) and 'helping people with the work you do' (89% vs 79%) were important factors in their career choices.
- 41% of female compared with just 30% of male respondents said that the pandemic has made 'having a positive impact on society' more important to them when deciding on a career.
- Similarly, 38% of female compared with 29% of male respondents said that 'helping people with the work you do' had become more important.

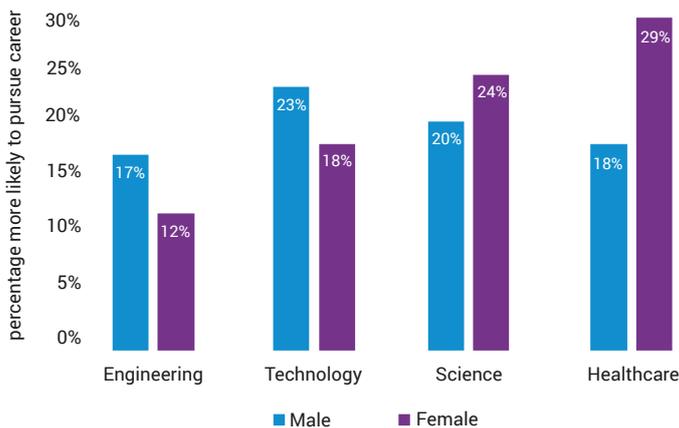
Our results suggest that the pandemic is deepening these already existing gender differences in STEM career aspirations, with a higher proportion of girls/young women than boys/young men saying they would be more likely to work in healthcare because of the pandemic, and a higher proportion of boys/young men saying they'd be more likely to work in engineering or technology.

- 43% of female vs 28% of male respondents said they would be likely to consider a career in healthcare. Furthermore, 29% of female respondents said the pandemic had made them more likely to work in healthcare, compared with 18% of male.
- 24% of female vs 44% of male respondents said they would be likely to consider a career in engineering and 12% of female respondents said the pandemic had made them more likely to work in engineering, compared with 17% of male.
- 37% of female vs 65% of male respondents said they would be likely to consider a career in technology and 18% of female respondents said the pandemic had made them more likely to work in technology, compared with 23% of male.

⁵ 557 male respondents aged 11-19 in the UK and 574 female respondents aged 11-19 in the UK

Figure 6 Impact of the pandemic on young people's likelihood of pursuing a career in engineering, technology, science and healthcare, by gender

Thinking about your career options, has the pandemic made you more or less likely to choose a job in the following areas?



Girls/young women were more likely than boys/young men to have taken part in a careers activity during the lockdown period, although this was largely driven by 'informal' activities, such as discussing careers options with parents and searching for careers information online.

- 60% of girls/young women had taken part in a careers activity during lockdown, compared with 49% of boys/young men
- 44% of girls/young women had discussed career options with their parents, compared with 30% of boys/young men
- 27% of girls/young women had searched for careers information online, compared with just 19% of boys/young men

There were no significant gender differences in participation for more 'formal' careers activities (attending an online careers advice session via their school or outside of it, an online careers event with an employer, work experience or another type of careers event).

Recommendations

The findings highlighted in this briefing have clear implications for policy and practice, especially in light of the heightened need to deliver substantial and sustainable economic growth into the foreseeable future and the government's ambition for the UK to become a global science superpower with a highly skilled workforce.

The results show that there is an invaluable opportunity to harness the increased interest in STEM careers as a result of the pandemic, but they also reveal that historic gender disparities in STEM career aspirations and uptake may be accentuated. Furthermore, those young people likely to be most affected by the lockdown, such as those from socio-economically disadvantaged or certain ethnic minority backgrounds, are already under-represented in some areas of STEM.

We must continue to research how the pandemic is affecting different groups of young people and work harder to ensure that they all have the information, inspiration, opportunities and support that they need to pursue STEM education and training and transition into STEM careers. Only by doing so will we ensure that we have the diverse and insightful workforce that enables the UK to thrive.

1. The government must ensure that young people have access to education, training, jobs and work placements in STEM.

The government will need to continuously review how well the incentives for employers to provide apprenticeships and work placements are working, and not shy away from amending the offer to employers going forward. Furthermore, the government needs to make sure that the route into university for young people keen to study STEM subjects remains firmly open and a viable and attractive option for young people from all backgrounds.

2. The government and organisations involved in STEM and STEM inspiration must do more to highlight how a career in STEM – and particularly in engineering – contributes to improving society.

The ability to make a positive societal contribution resonates strongly with young people and especially with girls and young women, who remain severely under-represented in engineering.

Women, for example, make up only 12% of the engineering workforce⁶ and just 8% of engineering and manufacturing technologies apprenticeship starts in 2018-19.⁷ This is problematic in light of the need for a diverse engineering workforce to enhance our collective ability to solve some of the largest social and economic challenges facing the UK.

3. In its review of the existing careers strategy, the government must focus on ensuring that all young people, whatever their background, have access to good quality, formal STEM careers education and advice.

Young people are actively seeking careers advice and information during lockdown, often by speaking to their parents rather than participating in any formal careers activity. We know that the extent to which parents are able to connect with STEM varies by background and this can have a strong effect on young people's aspirations and trajectories, potentially exacerbating existing inequalities.⁸

In order for all young people to have the opportunity to learn about STEM careers, what they can offer and the educational pathways needed to pursue these, formal STEM careers education and advice must be available to all, with a particular focus on girls/young women, those from lower socio-economic backgrounds and BME students, who we know are often less likely to access formal provisions.⁹

⁶ EngineeringUK. 'Gender disparities in engineering', 2018.

⁷ EngineeringUK. 'Educational pathways into engineering', 2020.

⁸ Archer, L. et. al. 'ASPIRES: Young people's science and career aspirations, age 10 – 14', 2013.

⁹ Moot, J. and Archer, L. 'Failing to deliver? Exploring the current status of career education provision in England', Res. Pap. Educ. 33, 2018

Technical details

Ipsos MORI interviewed a sample of 1,131 respondents aged 11 to 19 in the United Kingdom online between 30 June and 9 July 2020. Parental consent and respondents' consent were obtained prior to interviewing respondents aged 11 to 16. Data has been weighted with an equal spread across gender and age groups (11 to 13, 14 to 16, 17 to 19) and to the known offline population proportions for government office region. All polls are subject to a wide range of potential sources of error.

Bases:

- 1,131 respondents aged 11 to 19 in the UK
 - 541 respondents aged 15 to 19 in the UK
 - 169 respondents aged 11 to 19 in the UK who said the pandemic had made them more likely to choose a job in engineering
 - 613 respondents aged 11 to 19 in the UK who have taken part in any career's activity since schools closed down in March 2020
 - 389 respondents aged 11 to 19 in the UK who have taken part in any career's activity related to science, technology, engineering, and maths (STEM) since schools closed down in March 2020
 - 557 male respondents aged 11 to 19 in the UK and 574 female respondents aged 11 to 19 in the UK
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Who we are

EngineeringUK is a not-for-profit organisation, which works in partnership with the engineering community to inform and inspire young people and grow the number and diversity of tomorrow's engineers.

Established in 2001, we are funded predominantly via the professional registration fees of individual engineers, as well as the support of a range of businesses, trusts and foundations, and a corporate membership scheme.

We aim 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.

We urge those in education, government and industry to work together to foster the critical engineering and technology skills needed for the UK be a leader in innovation and improve societal and economic resilience and environmental sustainability.

Driven by data

We base everything we do on evidence and we share our analysis and insight widely.

Our research seeks to investigate pressing issues for engineering skills and is used by the media, policy makers and employers alike.

Through our Engineering Brand Monitor, we establish the national benchmark for public perceptions of engineers and engineering. We also regularly conduct research into engineering's economic contribution, the composition of its workforce, and the extent to which the supply through the education and training pipeline is likely to meet future needs and demand for engineering skills.

In addition, we evaluate all our activity to help ensure our engagements with young people have as much impact as possible. It is through this evaluation that we have identified the degree to which we are winning hearts and changing minds through our programmes, with positive impacts on young people's understanding of engineering, perceptions of a career in it, and the extent to which they view engineering as a career for both boys and girls. And we have learnt that if young people meet an engineer and know they have done so, they come away with higher levels of knowledge of what people working in engineering do and higher levels of perceived desirability of engineering careers.

