Decoding The Digital Skills Gap

Research report August 2024

In partnership:

Prince's Trust

Contents

Foreword from The Prince's Trust

It is essential that we centre young people in the UK's transition to a technology led economy. As our future workforce, this generation will spend their entire careers in our new economy, and their aspirations, livelihoods and working futures depend on being able to engage with this changing employment landscape.

Yet the current situation paints a worrying picture, one that does not have young people as the driving force we know they can be. This report asks why young people are not yet focused on pursuing digital jobs and skills and examines how we can unlock their interest and ability to engage with these careers and training opportunities.

Our research suggests that the majority of young people are not being equipped with the right knowledge or opportunities to pursue digitally enabled jobs or training. Nor do they have the confidence to go after it. Yet by the end of this decade, we know that nearly every job will require some level of digital expertise.

With evidence of a growing digital skills gap, we are presented with an opportunity for young people to access jobs and training in an ever evolving and developing sector, while also building the skills and knowledge employers need for the future. This can only happen with collective action. Otherwise, we risk locking young people out of our economy, while also failing to benefit from all that a rapidly growing, technology led economy provides.

This challenge demands urgent and collaborative action from governments, charities, educators, and employers alike, and this research identifies ways we can achieve this.

At The Prince's Trust, we understand the immense talent, determination and potential young people in the UK have to offer, when given the tools and support they need to succeed. This research tells us that young people want to develop their digital skills, but we must come together to better provide advice, guidance and access to meaningful opportunities, while demonstrating how they can lead to stable and sustainable careers.

Together, we can not only address the digital skills gap, but ultimately ensure young people are positioned at the forefront of the technology led economy, taking control of their own futures and leading the rest of society to benefit from its immense possibilities.

Jonathan Townsend, UK Chief Executive of The Prince's Trust

Prince's Trust

About this research

Prince's Trust

The Prince's Trust believes that every young person should have the chance to succeed, no matter what their background or the challenges they are facing. We help those from disadvantaged communities and those facing the greatest adversity by supporting them to build the confidence and skills to live, learn and earn.

The courses offered by The Trust help young people aged 11-30 to develop essential life skills, get ready for work and access job opportunities. We support them to find work because having a job or running a business can lead to a more stable, fulfilling life.

Since The Trust was founded by HM The King in 1976, when he was HRH The Prince of Wales, we have helped more than a million young people across the UK. Three in four of those we supported over the last five years have moved into work, education or training.

As we look to the future, we are pleased to have announced our intention to change our name to The King's Trust, reflecting our Founder's continued dedication to our work. We remain committed to enabling even more young people to create a better future for themselves and, by helping them today, know the benefits will be felt for years to come – not just for those we support, but for their communities and the wider economy.

cognizant

Cognizant (Nasdaq: CTSH) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at www.cognizant.com or @cognizant.

Cognizant has been working with The Prince's Trust for three years, funding pre-employment training programmes which have helped about 300 young people to date to overcome the barriers they face, develop the skills they need and secure careers in digitally enabled roles. Associates have been sharing their time, talent and technology with The Trust's community through Cognizant's social impact volunteering programme, Outreach.

Solutions Strategy Research Facilitation Ltd (Solutions Research) is a full-service insight agency working across the public and private sector on projects that deliver positive change to people's lives.

At Solutions WE LIVE TO UNDERSTAND. Set up in 2001, our ethos is based on the belief that everyone has the right to be truly understood. We use engaging research approaches to uncover deep human insight and combine this with strategic thinking to help our clients gain a better understanding of their target audiences and how best to meet their needs.

Report aims and methodology

This report presents insights into the key barriers preventing young people from pursuing digital skills and careers, and highlights solutions for educators, employers, third sector organisations and government to consider, which would help address the significant digital skills gap in the UK.

Specifically, it aims to:

1. Understand the influences impacting young people's awareness and comprehension of the digital skills needed for employment
2. Understand whether there are any specific barriers to awareness and access among different demographic groups
3. Understand young people's barriers to accessing digital skills, training and careers
4. Propose actions that will support young people and address the digital skills gap

Methods

This project was informed by five research activities, conducted between January and March 2024:

1. Rapid evidence review

The primary research question for the review was "What is known about the enablers and barriers to engaging with digital skills, training and jobs among young people aged 16-30?". Search terms relating to this question were used to search for relevant studies, and 15 papers were included in the review.

A behavioural lens was applied to organise the evidence and inform areas to explore in the primary research. The COM-B model[1] was used to provide a comprehensive and robust theoretical model to describe the barriers to young people engaging with digital skills training. This model guided the research to explore young people's capability, opportunity, and motivation to develop their digital skills.

2. Nationally representative survey

An online survey via Norstat with a nationally representative sample of 2001 young people aged 16-30 across the UK, undertaken in February to March 2024. The survey assessed engagement with, and confidence in, digital skills, along with assessing barriers and enablers to undertaking relevant training in future.

There are limitations on the survey data to note, primarily that the survey was conducted online using a research panel to meet cost and time constraints. Quotas were used to ensure the sample matched the latest available UK population data in terms of age, gender, ethnicity and region criteria. The survey was optimised for all devices including mobile. While this is a

[1] Michie, S., Atkins, L., & West, R. (2014). The behaviour change wheel: A guide to designing interventions

demographically representative dataset that delivers a high level of confidence in the findings presented, there are cohorts that would not appear in the data such as the digitally excluded.

3. Focus groups with attendees of The Prince's Trust digital courses

Young people aged 16-30 who had participated in a digital and technology themed employability course delivered by The Prince's Trust were invited to take part in a focus group. Eight focus groups were conducted in areas where the courses are delivered, with seven groups in person in London, Cardiff, Manchester, and Glasgow and one group conducted online with London course attendees. A total of 50 young people participated.

4. Focus groups with young people aged 16-30

A total of eleven focus groups were held online via Zoom with young people aged 16-30 from across the UK. Ten groups were recruited to reflect young people who can face additional barriers to engaging in training, education, and employment. A total of 48 young people participated.

All participants were from the top 50 per cent most deprived areas in the UK[2] with a minimum of two participants per group from the top 20 per cent most deprived areas. Each group included at least two participants who self-reported as having at least one barrier holding them back from further training or better employment opportunities. These included a long term health condition, caring responsibilities and low to no income.

Participants were either:

- Not in education, training, or employment (NEET)
- Underemployed, in part time training or education, and, or part time working (under 20 hours a week). This included zero hours contracts.
- In full time education or apprenticeship

The eleventh focus group was with young people working full time in a digitally enabled job in the digital or technology sectors.

5. Lived experience group

A lived experience group was created at the start of the research programme, with eight young people who had participated in digital and technology themed employability courses with The Prince's Trust. A series of online sessions were held with members of the lived experience group, the research team, and staff from The Prince's Trust. These sessions informed the research design, discussion guides, poll questions and reporting.

We would like to say thank you to these individuals for their valuable contribution to the research.

[2] 50 per cent most deprived areas (IMD2019)

Executive Summary

The Prince's Trust 'Decoding The Digital Skills Gap' report, in collaboration with Solutions Research and supported by Cognizant, investigates the barriers preventing young people pursuing digital skills and careers, and highlights the solutions to addressing the growing skills gap.

It offers recommendations for employers, educators, third sector organisations and government to consider, so that Gen Z's potential can be unlocked as the UK transitions to a technology led economy.

Context and aims

The UK sits on the precipice of a new industrial revolution, as global economies continue their relentless transition to a technology led economy that will permeate and impact our skills, jobs and industries.

A recent World Economic Forum forecast suggests that '77 per cent of all jobs will require digital skills from workers by 2030.[3]' The UK government's Digital Strategy from 2022 indicates this transformation is already well established, with over 80 per cent of all jobs advertised in the UK requiring these skills[4].

If successful, it promises enormous opportunities, delivering strong, sustained economic growth for decades to come and a vast array of jobs and careers to the millions of workers who will be expected to work in this economy.

Yet it faces a profound challenge, with extensive evidence of a wide ranging, deep and significant skills gap across the workforce. A recent update from FutureDotNow found that 54 per cent of the UK's workforce are unable to do all 20 digital tasks industry and government have defined as essential for work[5], and more than half of UK businesses report experiencing skills shortages[6].

Estimates suggest this digital skills gap currently costs the UK economy as much as £63 billion a year in potential GDP[7], rising to £120 billion a year by 2030[8].

Despite the significant evidence and research highlighting that there is a digital skills gap, and an appetite from government and industry to address it, there is little understanding of what the solutions are, or how to motivate people to engage with training and development in this area.

This challenge is particularly pertinent to this current generation of young people, who will spend the majority of their careers working in this new economy, and whose subsequent aspirations

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[3] https://www.weforum.org/agenda/2022/10/why-are-young-people-not-preparing-for-the-jobs-of-the-future/
[4] New Digital Strategy to make UK a global tech superpower - GOV.UK (www.gov.uk)
[5] https://futuredotnow.uk/wp-content/uploads/2024/01/FDN-roadmap-update_final-spreads.pdf
[6] https://www.theaccessgroup.com/en-gb/hr/resources/employee-talent-skills-development-skills-shortage/ ; https://www.cbi.org.uk/articles/getting-young-people-work-ready/
[7] New Digital Strategy to make UK a global tech superpower - GOV.UK (www.gov.uk)
[8] https://www.local.gov.uk/sites/default/files/documents/FINAL%20LGA%202019%20Skills%20Gaps%20report%20final%20December%202019.pdf

and livelihoods depend on being able to successfully engage with it. They are also in the position to help address the gap if given the right tools and opportunities.

Youth unemployment and the number of those not in employment, education or training remains stubbornly high and continues to slowly rise. Other recent research by The Prince's Trust highlights around half of this generation are worried they will not have the right skills, qualifications or experience to get a job in the future[9], and more than half (57 per cent) say they have lowered their long-term aspirations during the past two years[10].

It is within this context, that The Prince's Trust 'Decoding The Digital Skills Gap' report, in collaboration with Solutions Research and supported by Cognizant, investigates the barriers preventing young people pursuing digital skills and careers, alongside highlighting the solutions to this challenge.

It offers recommendations for employers, educators, third sector organisations and government to consider, so that the full potential of Gen Z can be unlocked in our increasingly technology led economy.

Five research activities informed this report, conducted between January and March 2024:

- a rapid evidence review of relevant studies
- a nationally representative survey of 2,001 young people aged 16-30 in the UK
- focus groups with young people who had engaged with a digital or technology course delivered by The Prince's Trust
- focus groups with young people aged 16-30 living in the 50 per cent most deprived areas in the UK
- a focus group of young people who had participated in The Prince's Trust digital and technology courses to inform the research design, questions and reporting

Key insights

This research examines young people's understanding of and engagement with digital skills, training and jobs as the UK transitions to a technology led economy.

A major challenge identified is the significant lack of awareness among many young people about the opportunities emerging, and their interest in or ability to pursue these opportunities.

Despite this, there is hope. The overwhelming majority of this generation are open to digital skills training and careers, if given the right knowledge and support.

- **the language gap** - there is a persisting and pervasive language barrier across the sector in relation to digital and technology skills, which is hindering this generation's ability to engage with relevant training and jobs. A lack of consensus about terminology

[9] Prince's Trust NatWest Youth Index 2024 (princes-trust.org.uk)
[10] Gen Z putting 'dream jobs' on hold according to new research (princes-trust.org.uk)

is a factor behind why young people feel confused, unconfident and uncertain about the skills needed for future careers, or the range of roles available in the changing economy. For the purposes of this report, we will refer to them as ‘digital skills’.

- **the engagement gap** - the research suggests that early, positive engagement in digital and technology skills while in education, is crucial to forging future interest in pursuing relevant training and career opportunities. Concerningly, it found that over a third (37 per cent) of young people across the UK did not study a digital or technology focused subject beyond Key Stage 3 (Ks3).
- **the aspiration gap** – although young people are aware that the majority of roles will require digital skills, and that these jobs are perceived to offer some of the qualities they seek from a job, there is a significant lack of appetite in pursuing these careers.
- **the accessibility gap –** the research reveals that pursuing relevant skills, training and jobs is unobtainable for many young people, due to a potent mix of digital isolation, combined with financial and personal pressures.
- **the opportunity –** the majority of young people are open to developing their digital skills, with only 6 per cent stating they would not be interested in training. However, they first need to understand the relevance to their future careers, and the benefits that working in a technology led economy can afford them, to generate an interest in actively pursuing relevant training.

Recommendations

The analysis of our research provides clear evidence that young people need substantial support to secure meaningful work, as the economy and employment landscape rapidly evolves around them.

Action is needed to raise awareness of the plethora of digital skills needed for their future careers, the broad range of roles emerging and the benefits these jobs can provide. Creating pathways and providing support to improve access to relevant training opportunities and these careers is equally crucial.

This report outlines several practical steps that educators, employers, third sector organisations and government can take to reduce the barriers identified. With collaborative action, we can not only address the digital skills gap, but ultimately ensure young people can access and take advantage of the significant opportunities a technology led economy can provide them, alongside the UK economy and broader society.

Educators

- **Integrate learning of practical digital skills across the curriculum** – Schools and further education providers should be supported to embed and deliver an integrated approach to learning digital skills across the curriculum, ensuring it is accessible for all young people from an early age and throughout their education. Delivery should focus

on practical learning rather than theory based, helping to generate interest, engagement and relatability.

- **Improve awareness of digital skills needed for future careers before Ks4 subject choices** – Develop curriculum so that it helps increase awareness about the importance of digital skills to employment and provides clear pathways to pursuing digital careers, prior to young people making subject choices for Ks4. This includes offering guidance on the courses and qualifications needed, alongside the availability and broad range of potential career opportunities. Emphasising that digital skills can be learnt by everyone, and that relevant careers are accessible to all is crucial within this approach.
- **Engage with employers to expand access to role models -** Engaging with employers, such as partnerships with local business and technology based companies can improve access to role models working in digitally enabled jobs, while also providing practical insights and experiences. Offering experiences like mentoring and work placements will help with addressing negative stereotypes and to build interest in future career opportunities, while ensuring young people secure practical experience of working in a technology led economy.

Employers

- **Clarify 'key' digital skills expectations and evaluate entry level jobs** - Collaborate with government, educators, and third-sector organisations to clarify core digital skills needed for young people entering the workplace. Clear communication about the skills required and the benefits of these roles can increase interest among young people. Evaluate entry level jobs to ensure that they are accessible and appealing to a diverse range of young people.
- **Invest in upskilling young people and co-delivery of training** - Support educators, training providers and relevant third-party organisations, financially and through co-delivery to provide training that is free to access, and which delivers, practical learning and experiences relevant to future employers.
- **Highlight workplace diversity and benefits of digitally enabled jobs –** When promoting digitally enabled jobs to young people, highlight the diversity of people involved, including the variety of educational backgrounds. To positively shift perceptions of digital jobs, place an emphasis on the creativity, progression, flexibility, and financial security these careers can provide, alongside a focus on improving awareness about the benefits these roles provide to society.

Third sector organisations

- **Raise awareness of and build confidence with digital skills** - Charities should utilise links to focus on engaging young people who already face challenges accessing employment, to raise awareness about the need for digital skills in future careers. Help to build confidence in their ability to learn these skills.
- **Provide free, practical and high-quality learning opportunities** - Collaborate with employers to ensure that all young people have access to free, high quality, practical

experiences and learning that helps to develop digital skills which are in demand, and which could lead to positive employment outcomes.

- **Support young people to overcome practical barriers to training** - Charities delivering skills development courses should focus on helping young people overcome their practical barriers to engaging in training, with a focus on those with a lack of constant, quality broadband and/or lack of access to suitable devices or software. Flexible opportunities are also needed to engage those young people who want to upskill, but already have commitments that would make engaging in intensive courses difficult.

Government

- **Develop a consistent digital skills taxonomy –** Working with industry and educators**,** lead a project to deliver a consistent and clear taxonomy of digital skills, which maps digital skills to jobs and career pathways. It should clearly set out which skills are of use to which sectors, and signpost to young people how different training routes and qualifications open these opportunities.
- **Create tools for assessing and developing digital skills -** Support a collaborative project to develop tools that help young people assess their digital skills level and identify gaps. These tools should be easily accessible and promoted throughout education to support ongoing skills development.
- **Develop flexible digital skills pathways to employment –** Develop a strategic plan for a broad range of digital skills development pathways, ensuring these are accessible to young people from all backgrounds. Work with industry to ensure that their needs can be met and fund training programmes offering increased flexibility with digital skills development pathways, which sit alongside existing successful routes.

Key Findings

The research identified key challenges that may impact young people's engagement with digital skills training, development and jobs.

Language gap

The research identified a persisting and pervasive language barrier in relation to digital skills, training and jobs that are relevant to a technology led economy.

It suggests that a lack of consensus around terminology is a key factor behind why young people feel confused, unconfident and uncertain about the skills they need for their future careers, or the range of roles available.

Building a simple, consistent way of talking about digital skills and opportunities, from education through to employment, is critical to help this generation of young people understand, engage with and benefit from the opportunities the changing economy presents.

Note that while the research highlighted that phrases such as digital or tech skills, jobs and economy are used interchangeably, for the purposes of this research, we will use the terminology 'digital skills' and 'technology led' economy.

A significant theme in the focus groups was a distinct and significant lack of clarity among young people about the language related to 'digital skills'. It suggests that without a clearly defined terminology across the digital skills, training and jobs landscape, young people's ability to understand and engage with opportunities afforded by a technology led economy, is hindered.

The rapid evidence review also found little discussion or exploration in prior work about what is meant by 'digital skills' or 'digital jobs', with the quantitative research identifying confusion amongst young people when defining relevant skills and jobs.

A factor influencing this is what appears to be a lack of consistency and consensus amongst language used by educators[11], employers and policy makers. A recent report by Nesta[12] which looked at employer demands for digital skills across 41 million UK job adverts, highlighted a broad range of variety, with 756 different types of software and 602 additional skills mentioned in these adverts. PwC's research[13] on global youth employment identified a 'skills identification gap' when referring to 'building a pipeline of workers suitably trained for the digital future.'

Due to this language gap, our research highlighted that young people must rely on their existing awareness, familiarity and confidence to engage with and pursue relevant skills, training and careers. The remainder of this research suggests that for significant sections of young people, this is at low levels.

[11] Research Review: Computing
[12] Which_digital_skills_do_you_really_need.pdf (nesta.org.uk)
[13] genu-pwc-report-december-2021.pdf

In focus groups, ‘digital and, or tech skills’ felt like a vague term for many young people. They were seen to cover a wide range of different skills, with terminology such as ‘digital skills’ and ‘tech skills’ often overlapping, and no clear differentiation or consistency between what was considered to be either. Some were able to define digital skills as those that involve day-to-day interacting on devices, to ‘front-end’ skills and ‘technical’ skills as more specialist, but this was limited to more knowledgeable participants.

> *“[what are tech skills?] …software… with analysts though I’m not sure, to answer that question you would need to look at the definition of both things, but I think those two are a bit difficult, even with IT I don’t really know.” (Prince’s Trust course attendee, Manchester)*

> *“Digital is stuff that happens on the computer, and tech is the computer. But is that also digital? I’m not sure you can split them apart.” (19-23, female, NEET)*

> *“If you say the word ‘tech’, people don’t understand it. They think it’s all under one banner, something to do with computers.” (Prince’s Trust Lived Experience Group)*

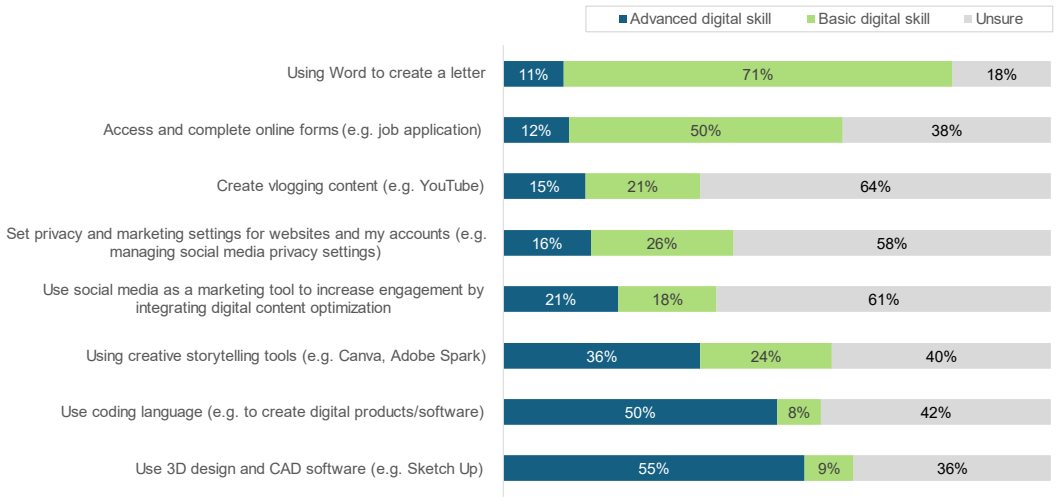
> *“There are a broad range of digital and tech skills, and it is hard to group them in one category as you need a unique set of skills for each.” (21-25, male, employed in tech sector)*

> *“I thought one would be coding, while others would be knowing your way around your own device – how to download things etc. Being able to use it to its fullest extent. Not sure what would call those.” (19-23, female, employed under 20 hours)*

> *“There is a blurred line between them isn’t there. Maybe digital is more online and tech can be online but also in person.” (19-23, male, employed under 20 hours)*

The survey also revealed a lack of consensus on which skills were considered basic and advanced, exacerbated by the fact that some skills were unfamiliar to some respondents (see Appendix for full list of skills tested). One in ten young people surveyed (11 per cent) considered using Word to be an advanced skill.

Consideration of digital skills as basic or advanced presented in order of smallest to largest difference



Survey questions: Which of the following do you consider to be Basic digital skills? | Which of the following do you consider to be Advanced digital skills?

Similarly, the qualitative research highlighted that for many young people, 'digital and tech jobs' did not feel like a distinct category of roles. They were often unclear about what jobs existed within this framing, or unaware about the relevance of digital skills to a broad range of jobs. Some young people did associate technology jobs with roles such as coding, and digital roles with more creative or media focused jobs, but this was not a consistent trend. Likewise, some young people suggested that digital skills were part of many roles, which only highlights further the uncertainty caused by the differing terminology currently used.

> *"[moderator - is it clear what sort of jobs, careers and opportunities fall into digital/tech for you].. sometimes it's not… before the course I had no idea what digital marketing was… [digital and tech] feels a bit blurred."* (Princes Trust course attendee, Manchester)

> *"(moderator) when I say digital and tech jobs what jobs come to mind? (respondent) I'm going towards big roles like UX design or computer programmer, not bookkeeper or receptionist."* (Princes Trust course attendee, London)

> *"[What are tech careers] Coding… software developing… data analysists… but I'm not sure….[Working in digital marketing] I analyse a lot of data and I wouldn't class that as tech… my friend she analyses data and she codes software, but she classes it as tech."* (Princes Trust course attendee, Manchester)

> *"[discussing what jobs fall into 'tech'] handling data, data analysts [group struggles to generate roles spontaneously] business management online."* (16-18, in education)

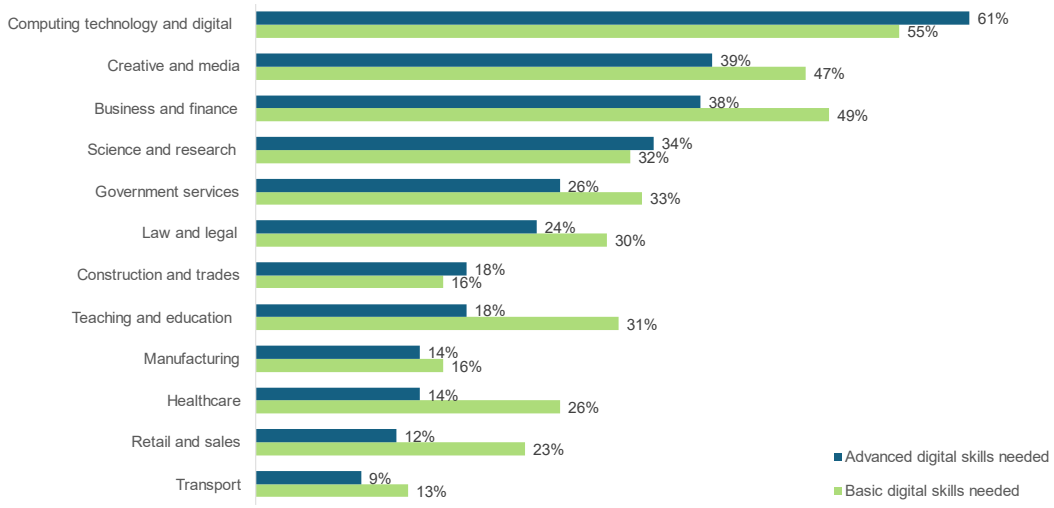
> *"I guess I am unsure about what really counts as a tech job… it's like all IT type people. Jobs like analysts, technicians, data scientists."* (19-23, female, NEET)

"Doesn't it depend on what you do in your job, or what you use these skills for? Like these days a personal trainer might know how to code." *(24-30, female, employed under 20 hours)*

"Digital is just everything these days. Aren't all jobs 'digital jobs' then?" *(Princes Trust course attendee, Cardiff)*

The survey data echoed these findings. When asked which sectors will require basic digital skills (as defined by the young person), young people defaulted to computing and office-based roles, with little awareness of more practical, manual or hands-on roles as requiring basic digital skills. Asked about advanced digital skills, and the only sector that most agreed on (61 per cent) was 'computing, technology and digital.'

Sectors where basic or advanced digital skills are most important to secure a job, presented in order of highest % for advanced digital skills



Survey questions: Which of the following areas do you think it would be most important to have these Basic Digital Skills to secure a job? | Which of the following areas do you think it would be most important to have these Advanced Digital Skills to secure a job?

These findings suggest that the language gap and lack of clarity it provides young people, means many do not understand the extent to which the majority of jobs will require digital skills in a technology led economy, nor how well equipped they are to pursue these opportunities. The UK government's latest Digital Strategy indicates that already over 80 per cent of all jobs advertised in the UK require digital skills[14].

When shown a range of digital tasks (see Appendix), over two thirds of young people (83 per cent) rated themselves as very or somewhat confident to complete the tasks. This reflects the latest findings from the Lloyds Consumer Digital Index[15], with 67 per cent of 18-24-year-olds feeling their digital skills needed no further improvement.

[14] New Digital Strategy to make UK a global tech superpower - GOV.UK (www.gov.uk)
[15] lloyds-consumer-digital-index-2023-report

Combined with the other findings in this chapter, it suggests a significant awareness gap for many young people, who are not considering their digital skills, due to a lack of knowledge about the breadth of roles that will require these in a technology led economy.

The qualitative research evidenced this further, suggesting that confidence in skills and a need to seek further training is almost entirely subjective, based on their own interests versus what the majority of employers will require in a technology led economy. A compounding factor appears to be the reliance on self-assessment of skills due to a lack of objective, external tools to assess skill levels.

> *"I'd say I'm pretty confident with most of those tasks, even creating a website. You can always find things on the internet to help you."* *(19-23, female, NEET)*
>
> *"I'm an 8 out of 10 in my confidence with social media, probably more like 6 or 7 with Word because I can write a letter."* *(19-23, female, NEET)*
>
> *"There are some things I've had no desire to learn, and some I just haven't learnt yet. So I'd say I'm about a 7 (out of 10)."* *(24-30, female, employed under 20 hours per week, computer science degree)*
>
> *"Me I am 6.5 [out of 10] as I'd put myself as a 10/10 on Trello and an 8 on Vlogging but there are other things I don't know at all."* *(24-30, female, employed under 20 hours)*
>
> *"When you are younger you aren't thinking oh I'm going to need that further down the line – I put it in the same place as maths, like not something you need or will use."* *(24-30, female, employed under 20 hours)*

It is important to note in both the qualitative and quantitative research, those most likely to have a lack of confidence in completing digital tasks were already facing existing barriers to employment, such as being unemployed, or self-reporting as disabled or having a mental health issue.

Conclusion

Ultimately, the research suggests that the persisting language barrier around digital skills and jobs, means the majority of young people are only conscious about career opportunities in stereotypical sectors, with a false sense of security about how well equipped they are to pursue these.

Without action, it implies they, the UK economy and broader society will not be able to benefit from the opportunities a technology led economy presents.

Building a simple, consistent way of talking about digital skills and opportunities, from education to employment, is critical to help this generation of young people understand, engage and equip themselves to benefit from the opportunities it offers.

Just as critical, is building knowledge and awareness about the breadth of jobs out there, and of the relevance of digital skills to the majority of roles in a technology led economy. Providing tools to enable young people to accurately and objectively assess their digital skills levels, and any gaps, would also be beneficial.

Engagement gap

The research suggests that early, positive exposure, engagement and experiences of digital skills while in education is crucial to forging future interest in pursuing relevant training and career opportunities, but that this is not consistently available to young people across the UK.

Over a third (37 per cent) of young people responding to the survey stated they did not study a 'digital or tech subject' beyond Key Stage 3 (Ks3).

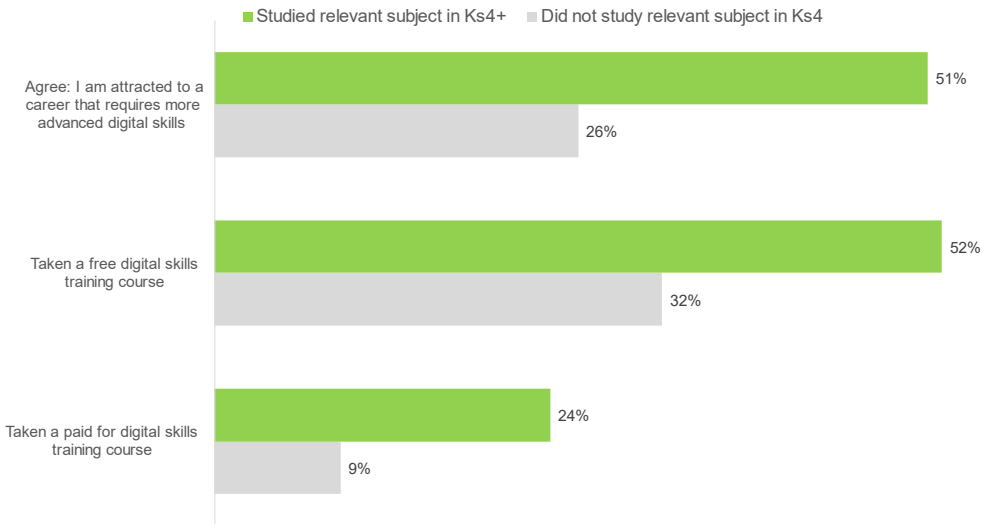
It suggests educators need to be supported and equipped to provide positive experiences in digital skills development from an early age, and that this will help to build confidence and interest amongst this generation in pursuing relevant training and job opportunities.

It is clear from the research that young people who have early, positive engagement and exposure to digital skills while in education, are significantly more likely to be interested in pursuing skills, training and jobs relevant to a technology led economy. However, over a third (37 per cent) of young people responding to the survey stated they did not study a 'digital or tech subject' beyond Key Stage 3 (Ks3).

The research suggests that this is partly due to the offer of digital and technology subjects in Key Stage 4 (Ks4) and beyond, not being consistently available to pupils across the UK. Over a quarter (27 per cent) of young people said these subjects were not offered, and one in five (20 per cent) that they were not encouraged to do it.

Over half (51 per cent) of young people who had studied a 'digital or tech subject' agreed they were attracted to a career that requires advanced digital skills, compared to 26 per cent of those who had not studied a relevant subject beyond Ks3. Similar numbers were likely to have taken a free (52 per cent) or paid for (24 per cent) training course to develop their digital skills, compared to only 32 per cent and 9 per cent of their counterparts who had not studied beyond Ks3.

Attraction to advanced digital careers and engagement with digital skills training among those who did and did not study relevant subject in Ks4



Survey questions: To what extent do you agree or disagree with the following statements? (% Strongly agree or agree) | Have you done any of the following to develop your own digital skills?

Those who had studied a relevant subject in Ks4, were also far more likely to be interested in pursuing a range of digitally enabled jobs. This demonstrates the impact of early engagement on continued interest in further developing digital skills and pursuing relevant career opportunities.

Interest in digitally enabled roles among those who did and did not study relevant subject in Ks4, presented in order of biggest difference

Role	Did Not Study	Did Study	Change in Interest for those who did not study
Software Developer	36%	65%	-29%
Robotics Engineer	30%	59%	-29%
IT Support Technician	35%	63%	-28%
Web Designer	43%	71%	-28%
Games Developer	40%	67%	-27%
App Developer	42%	69%	-27%
AI Engineer	37%	63%	-26%
Cyber Security Analyst	42%	65%	-23%
Digital Marketing Assistant	47%	65%	-18%
Data Analyst	51%	69%	-18%
Social Media Specialist	55%	70%	-15%
Vlogger	50%	62%	-12%

Survey question: Using the scale, please indicate in your personal level of interest in each of the following digitally enabled jobs?
% shown is very or somewhat interested

The qualitative research also highlighted the importance of the school experience in shaping a young person's future interest in digital skills and jobs, and confidence in their ability. This highlighted considerable variability in young people's perceptions of the quality of their learning, with interest in these skills being determined at secondary school spontaneously raised. This finding resonated particularly strongly with participants on the lived experience panel. Those without this interest felt they were more likely to disengage, due to low confidence in their skills.

> *"I never really had to do anything IT at school, I learnt things by trial and error by myself." (19-23, female, NEET)*
>
> *"I did computer science, but it was very basic, and I've pretty much forgotten what we did." (19-23, male, NEET)*
>
> *"I did psychology and sociology, not necessarily because they were what the girls were doing, but you wouldn't find any of the girls doing the computer science… I was really close to choosing IT because they had a specific course that was media and journalism I think, which I was interested in. But not enough people wanted to do it, so they had to combine it all. And because I then would have had to do like coding and computer science. That part that I wasn't really interested in. I just didn't pick it." (19-23, female, NEET)*
>
> *"Especially when you talk about coding, it looks so difficult and if basic skills were taught in school it would make the shift into real life skills much better…Just learning how to use Word and maybe presentations just isn't enough. Particularly Excel, this is something that can be used a lot in finance and I was taught the very, very basic stuff." (Prince's Trust Lived Experience Panel member)*

Young people also talked about being 'locked in' when it came to their education and career pathways, feeling that they had started on a path where digital skills featured as a priority, or it did not feature at all.

The factors that determined whether someone had 'locked in' to a pathway were how relevant they perceived these skills to be to their career aspirations, and whether they felt confident in their digital skills, alongside their experience in designated classes, and how engaging they found the content. There was significant variability in how these skills and careers were promoted and encouraged. Those who felt the skills were not relevant, were more likely to disengage in future development and engagement.

> *"[Why didn't you pick GCSE Computer Science in school?] Just personal interest… I didn't think it was going to take me where I was going to go… the school didn't really make it appealing or try to help you understand why it is really anything… it was kind of just computers that's a good broad thing so it wasn't something I felt interested in." (16-18, in education or training)*
>
> *"You get locked in. That's a product of how education works. By aged 11, I knew the GCSEs and A-Levels I needed to do, so I could do the job I wanted – but I then cut off everything else." (Prince's Trust Lived Experience Panel member)*
>
> *"I formed my opinions of what I was good at, [and] not good at by the time I finished sixth form. I never considered IT an option until way later on." (Prince's Trust Lived Experience Panel member)*

Finally, the research suggests having a relevant role model outside of school can have a profound, positive influence on young people's engagement in studying digital or technology subjects within education. The survey showed that people who know someone in a digitally based job were more likely to have studied a digital or technology subject, versus those that did not (61 per cent versus 47 per cent). Concerningly, young people from the 20 per cent most deprived areas of the UK and those who are unemployed were significantly less likely to have access to such a role model.

The qualitative research with Prince's Trust course attendees supported this evidence, with several sharing how knowing someone working with a digital role, or who had taken a relevant course, had subsequently encouraged their future interest and attendance on the course.

> *"Digital marketing, I'm interested in what my sister did… (talking about sister) she helps with my career, and she was very motivational and inspirational, and I really like what she does so I thought maybe give it a go."* *(Prince's Trust course attendee, London)*
>
> *"I had a friend who had done a Prince's Trust thing before and he said I should give it a go… it was the same thing my friend had done before."* *(Prince's Trust course attendee, London)*
>
> *"I met this amazing person there and she was actually doing the social media managing for the company and I got the chance to work alongside her. So I thought, oh, this is kind of interesting... so I thought I may as well learn something about it."* *(Prince's Trust course attendee, London)*

Conclusion

These findings suggest that educators need to be supported and equipped to provide positive experiences in digital skills development from an early age, and that this will help to build confidence and interest amongst this generation in pursuing relevant training and job opportunities.

This need[16] has previously been widely researched among STEM subjects, with the predominant focus to date on interventions encouraging more young people to study mathematics and science. While initiatives have been introduced to improve teaching and participation in digitally relevant subjects, such as the creation of the National Centre for Computing Education (NCCE), the findings suggest more needs to be done.

As stated by National Numeracy[17], it is 'culturally acceptable in the UK to be negative about mathematics, in a way that we don't talk about other life skills.' The evidence gathered in this research suggests a similar level of acceptance exists around digital skills. Due to a lack of exposure, engagement or poor experiences in education, significant portions of young people hold a negative perception of their own abilities, based on a feeling that these are skills some just 'naturally' have and are not able to learn.

The evidence above points to the positive influence that role models can have on young people engaging in digital skills, and in considering relevant careers, there is also a need for creative

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[16] Dweck, C., Mindset: The New Psychology of Success; Ballantine Books, 2016

[17] https://www.nationalnumeracy.org.uk/research-and-resources/attitudes-towards-maths

approaches to deliver the same impact for a wide range of young people. This is further proof of the need to ‘show not tell’ young people that digital skills are accessible and for people like them.

Aspiration gap

The research reveals that despite young people being aware that the majority of roles will require digital skills, and that these are perceived to offer some of the qualities they seek from a job, there is a significant lack of aspiration and interest in pursuing these careers.

Negative stereotypes about digital roles emerged as a reason for this in the qualitative and quantitative data.

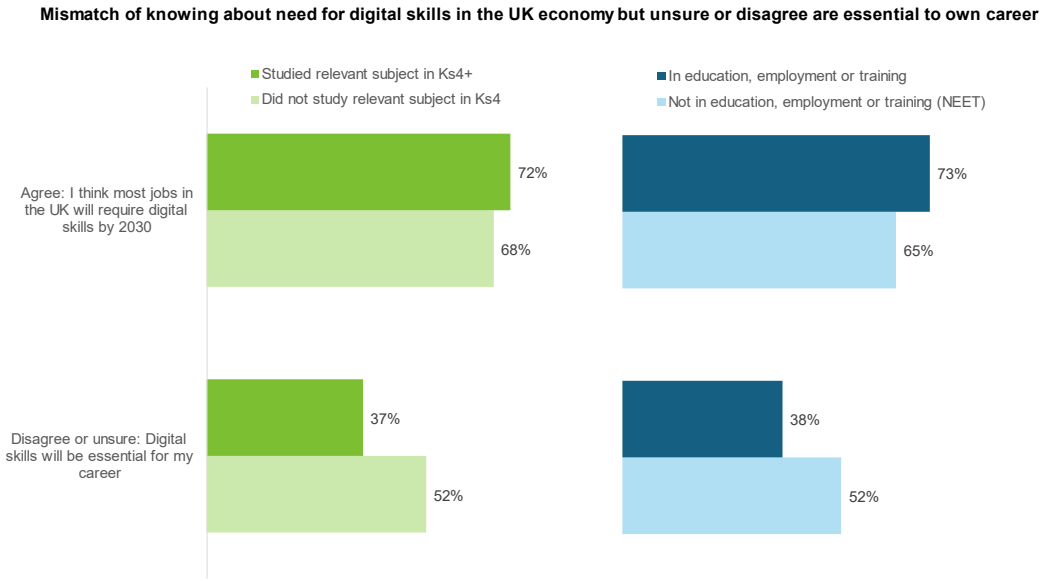
Ensuring young people feel more confident in their skills and the training they need to develop, along with a concerted focus to improve knowledge about these careers, is crucial to preparing them to benefit from the opportunities a technology led economy presents.

A recent World Economic Forum forecast suggests that ’77 per cent of all jobs will require digital skills from workers by 2030.[18]’

The survey data from this report suggests young people have a good understanding about this ongoing transition to a technology led economy, and the importance of digital skills to future career opportunities, with almost three quarters (71 per cent) agreeing or strongly agreeing that most jobs in the UK will require digital skills by 2030. Those in education, employment or training (73 per cent) were significantly more likely to agree than those not in education, employment or training (NEETs) (65 per cent).

[18] https://www.weforum.org/agenda/2022/10/why-are-young-people-not-preparing-for-the-jobs-of-the-future/

Despite this, over two fifths (42 per cent) were unsure or disagreed that digital skills would be essential to their future. This mismatch is particularly notable for NEETs and those who did not study a digital related subject after Key Stage 3 (Ks3).

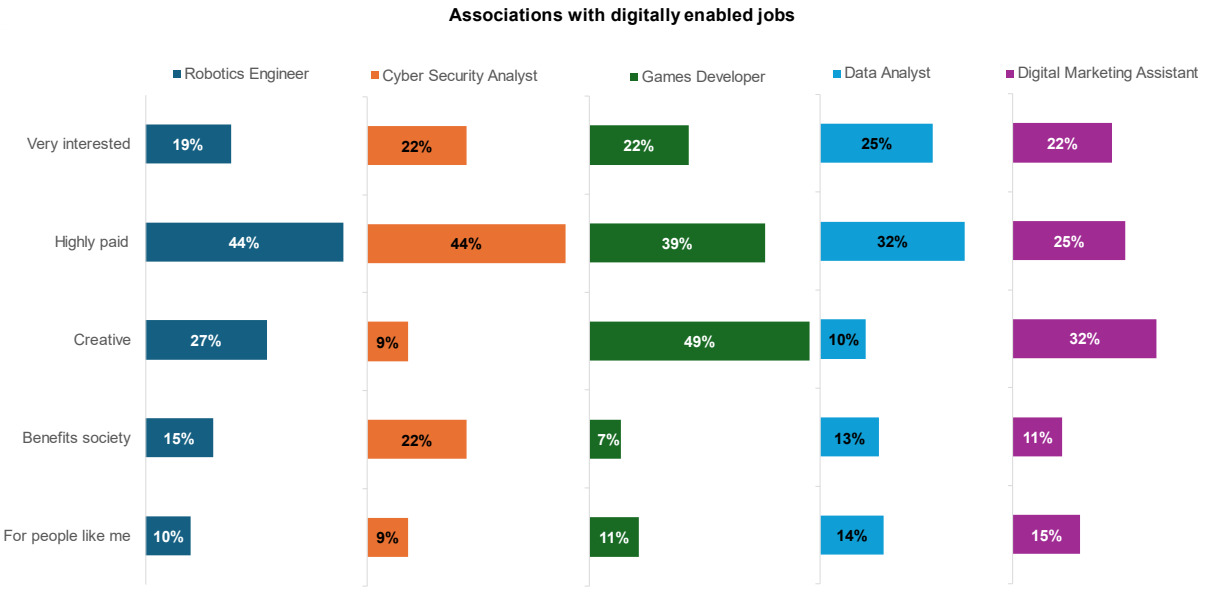


Survey questions: To what extent do you agree or disagree with the following statements?

Exploring this further, the qualitative and quantitative data revealed a disconnect between what young people say is important to them in employment, and what they perceive some digital jobs will deliver, leading to a lack of interest in pursuing these roles.

Shown a list of digital or technology focused roles which are likely growth areas for the future, such as Robotics Engineer, Cyber Security Analyst and Computer Games Developer (see appendix for full list of roles), and asked about their associations with these, young people had relatively low levels of interest in pursuing. This is despite them being seen as well paid or creative, which were two of the top three responses to what young people would like from employment, alongside flexibility.

Across all jobs, young people reported strong associations with perceptions that they were ‘not for people like me’ and would be ‘difficult’ or require ‘high levels of education.’ With a fifth (21 per cent) of young people stating that work which ‘benefits society’ was important to them in their working life, it is also notable that this was not associated strongly with the majority of roles shown.



Survey question: Which of the following do you associate with each job?

The focus groups reflected perceptions identified in the survey. Young people placed a high value on finding a job that they enjoy, that was flexible and that matches their interests and values. More knowledgeable participants acknowledged some digital roles could be creative and sociable, well paid, or with a cool edge. However, others had more stereotypical associations, perceiving the digital roles they were aware of as likely to be boring, lonely, office based and out of reach. There was also little consideration given to external factors such as job availability, and no spontaneous awareness of any difficulties that employers might have in terms of filling existing vacancies, due to a digital skills gap.

> *"It's important that you are happy in what you are doing. You spend a lot of time at work."* *(24-30, female, employed under 20 hours per week)*
>
> *"You want to do something you care about, to help you get up in the morning."* *(19-23, female, NEET)*
>
> *"You've got to be happy about what you are doing."* *(24-30, male, employed under 20 hours)*
>
> *"I don't want to sit in front of a computer all day."* *(19-23, female, employed under 20 hours per week and in further education)*
>
> *"It's not very exciting, I'm a people person, I just don't think I could be sat doing IT."* *(24-30, female, NEET/employed under 20 hours)*
>
> *"It's more just because I'm interested in more like hands on jobs or physical jobs rather than just sitting down at a computer. That's not really a thing I'm interested in."* *(16-18, male, in education)*

Furthermore, the focus group discussions identified a lack of familiarity amongst young people with the range of roles that exist, and a lack of knowledge of what different roles entail. Few reported having contact with employers within formal education to build familiarity with what happens day to day in work. Despite initiatives in recent years to enhance career guidance, including the implementation of the Gatsby benchmarks[19] that are known to improve career readiness, young people in the focus groups shared how difficult it was to secure an entry-level job without relevant work experience.

> *"[discussing how participant did not know their job existed before doing the Princes Trust course]I didn't know my job was a job… And I absolutely love it. And so I never knew about that really, which is cool."* (Princes Trust Course attendee, Manchester)

> *"When you see roles – the stages you need to go through to get those entry-level roles is so high."* (Prince's Trust course attendee, London)

> *"People want experience that you are never going to have at this stage."* (Prince's Trust course attendee, Manchester)

> "*'[moderator - what attracts people to tech roles?] its repetitive, people who like routine, patterns…tech roles are really good pay, stable…. You get a lot of people who are good at maths… thinkers, problem solvers [moderator – what turns people off these careers?] how difficult it is…thinking I don't like maths… I'd like to imagine it's not that fulfilling… the company expects high grades and technical experience as well."* (Prince's Trust course attendee, Manchester)

Conclusion

Without action, the research suggests that the well documented digital skills gap is likely to increase further, presenting significant challenges for employers in filling vacancies, and for young people, particularly NEETS, difficulties in securing employment.

Ensuring young people feel more confident in their skills and the training they need to develop, along with a concerted focus to improve knowledge about and pathways to these careers, is crucial to preparing them to benefit from the opportunities a technology led economy presents.

[19] https://www.gatsby.org.uk/education/focus-areas/good-career-guidance

Accessibility gap

Underpinning the other key insights revealed in this research, is the simple fact that pursuing digital skills, training and jobs is unobtainable for many young people.

It suggests that a potent mix of digital isolation, combined with financial and personal pressures, is hindering young people's aspirations and access to the knowledge and opportunities a technology led economy presents.

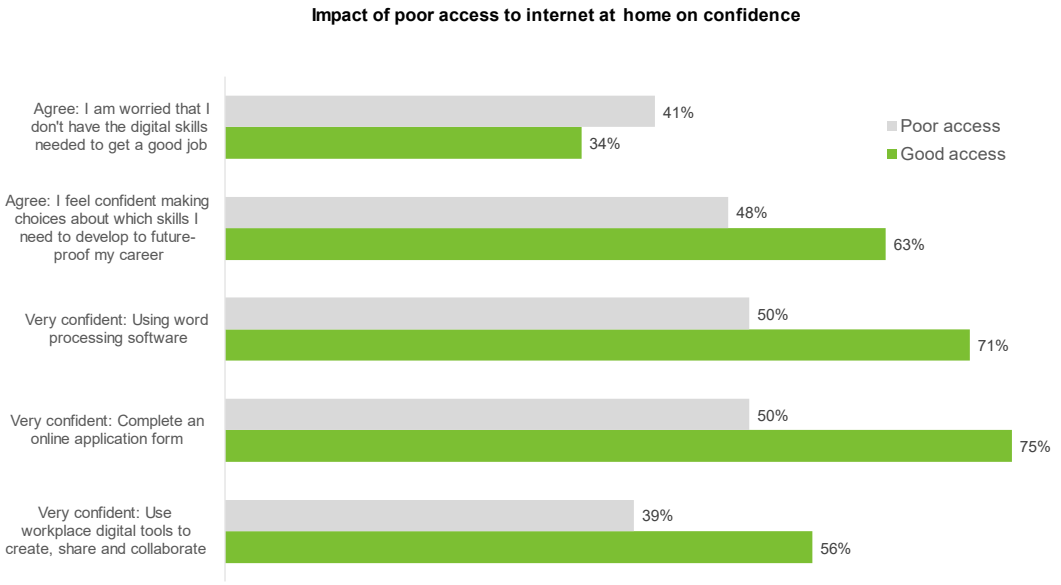
Providing the support to overcome these barriers is crucial, so that all young people can benefit from this changing economy.

The research suggests that to understand the barriers to pursuing digital skills, training and jobs, or the solutions to overcoming them, digital isolation must be a key consideration.

Almost a third (29 per cent) of those surveyed said they did not have constant access to the internet at home via fixed broadband, with nearly one in five (18 per cent) stating that they did have access, but sometimes needed to modify or cancel due to affordability. One in ten (11 per cent) stated they only had internet access via a mobile phone. This echoed findings from recent Ofcom research, which shows that 18 per cent[20] of UK households had an affordability issue with internet access in the home, and that this has been increasing since early 2021.

The research suggests that those with poor access[21] to the internet were more likely to be worried about not having the digital skills to get a good job, and also felt less confident when making choices about the skills they need to develop to future proof their career. When asked how confident they felt in conducting a range of digital based tasks, young people with poor internet access were also more likely to feel less confident in doing these[22].

[20] https://www.ofcom.org.uk/__data/assets/pdf_file/0022/234364/digital-exclusion-review-2022.pdf
[21] Poor internet access defined as young people with variable internet access due to affordability or mobile only. Good access as those with constant access via fixed broadband.
[22] Exception were Coding and Design a digital product where those with poor access had higher percentage stating very confident than those with good access



Survey questions: To what extent do you agree or disagree with the following statements? | How confident, if at all, would you be in completing the following tasks on a mobile/tablet/computer if required to complete today?
Poor access: Internet access at home via mobile only or variable access ; Good access: Internet access at home constant

Young people not in employment, education or training (NEETs), from Black, Asian or Minority Ethnic backgrounds or living in the top 20 per cent of the most deprived areas in the UK were more likely to not have constant access to the internet, and to either face affordability challenges or access via a mobile only.

The survey also found that young people with poor access to the internet were more likely than peers to have conducted free or paid for training. Those with good access to the internet were far more likely to state they had self-taught themselves digital skills. Combined with the confidence in digital skills to get a job, and making choices for their future career findings, it suggests those with poor access could be taking proactive steps to address this. However, as the opportunity chapter explores in more detail, collective action is required to achieve this.

Access to appropriate technology was a key factor preventing young people from pursuing digital skills, training and jobs. Almost a third of young people (30 per cent) said they did not have access to a laptop or desktop and were reliant on tablets or mobile phones. NEET young people were most likely to have no access to their own device. Around one in ten reported not having the right technology as a key barrier to them pursuing training in advanced digital skills (14 per cent) or basic digital skills (9 per cent). These findings were repeated in the qualitative research.

> *"Subscriptions to programmes like photoshop, word etc are hard to afford and have ongoing access. I left school 10 years ago and then it's hard to keep up (with skills)."* *(Prince's Trust course attendee, London)*

> *"Leaving school and losing access to so many things... I don't use Word as its expensive, and instead use google docs as it's free. So you are losing out on the skills that you should have."* *(Prince's Trust course attendee, London)*

"If websites don't work on mobile, it's super likely I won't be able to apply (for courses or jobs). I asked my sister if I could borrow her laptop for this, and you can see how that causes issues if she needs to use it for her job during work hours etc." (Prince's Trust course attendee, London)

"When I was applying (to training programmes) I would miss deadlines as my parents, sibling and I shared one laptop. So yeah, technology is not accessible to everyone." (Prince's Trust course attendee, London)

"I share broadband with fifteen other people in my shared house, so I just don't bother most of the time." (Prince's Trust course attendee, Cardiff)

"I do have broadband in my house, but I sometimes have to change it if I haven't got the money for it." (Prince's Trust course attendee, Cardiff)

Affordability was also a significant barrier to pursuing training. Nearly a third (31 per cent) stated 'cost' was a key barrier to choosing advanced digital skills training, and 23 per cent as a reason for not pursuing basic digital skills training. These findings were echoed by the qualitative research, with those on low incomes, with caring responsibilities much more likely to respond this way.

"Money needs to be talked about as part of courses; you've got to be able to live." (19-23, male, employed under 20 hours)

"I'm learning coding using the Nemo app on my phone… and I am keen to learn about gaming software. But it's about affording it, these courses can be a lot of money." (19-23, male, NEET)

"These courses, they would need to cover your costs like loss of earning. I'm not sure many people could do it without that." (19-23, female, NEET)

"I don't have access to good internet and live in one room. I wouldn't do a course online, I wouldn't be able to do it." (Prince's Trust course attendee, Cardiff)

Personal circumstances also emerged as a key issue to accessing development opportunities within the focus groups. This was particularly notable for those with caring responsibilities, on low incomes, and, or in employment, where time out of work would mean a loss of income. This theme remained consistent, even for those highly motivated to further their digital skills.

"To study it would take time and I have bills to pay, I have a family to run and kid to take care of, so I had to drop it (previous training)." (24-30, female, NEET or employed under 20 hours)

"For me specifically now I don't have much time as a mum." (19-23, NEET)

"Flexibility is key. I was trying to do a science GCSE to get onto a course but there's no way unless you want to do it during the daytime or full time, and I have to work." (24-30, female, employed under 20 hours)

"Have to still be able to earn money while doing it,… can't afford to spend weeks not working." (19-23, female, employed under 20 hrs)

"I am interested in sectors like science or computing, I was studying Geology and know things like 3D design. I can't take weeks out of my life to do training though, would have to be flexible and I'd need to know what careers it would lead to before I went ahead." *(19-23, male, unpaid carer)*

"If it was free I'd be more inclined, but might question if it's any good, if employers will see that as valuable." *(19-23, female, NEET)*

"Financing is important… people don't want to risk it. No guarantee that you will get the job, or that the certificate will mean something to employers. Especially if asking for full time commitment, for longer periods of time and not being able to work as a result." *(19-23, female, employed under 20 hours)*

Conclusion

These findings highlight that improving accessibility to digital skills, training and job opportunities for all young people, is crucial to the success of any solution seeking to address the digital skills gap.

In order for young people from all backgrounds to seek out training opportunities, they need to have access to appropriate devices and software, and they need the courses to be financially accessible, which for most means it needs to be free. These also need to be flexible, to ensure those with caring responsibilities and, or in employment can engage around other commitments.

Removing these barriers would be a significant positive step, in encouraging and enabling more young people to develop their skills and benefit from the opportunities the technology led economy offers.

The opportunity

Despite the broad ranging barriers identified in this research that are preventing young people from engaging in digital skills training and careers, it also presented a significant opportunity.

The overwhelming majority of this generation are open to developing their digital skills and pursuing relevant training and careers. Crucial to taking advantage of this opportunity is a need to tap into the 'jobs first' mindset that is displayed by young people throughout the research.

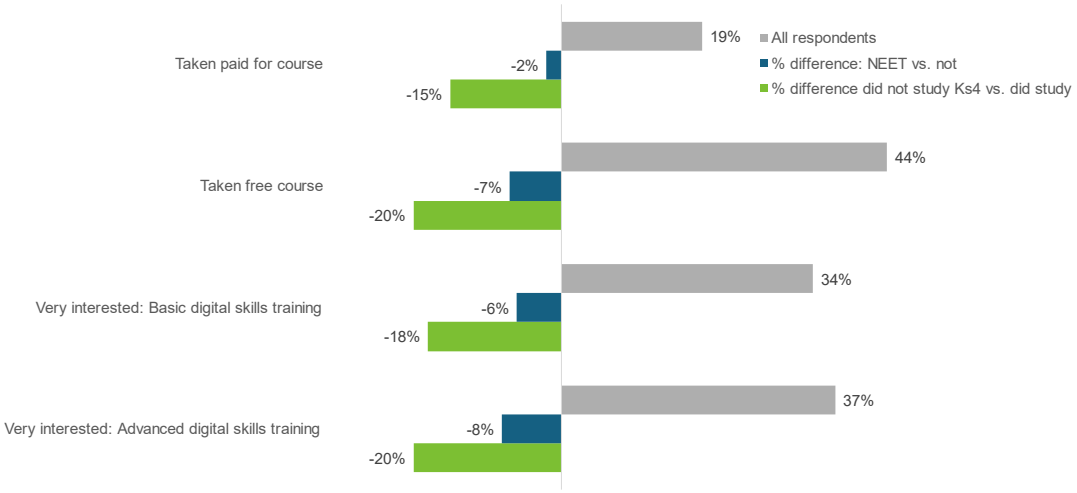
By improving awareness and understanding about the relevance of digital skills to future careers, alongside accessibility, young people, the economy and wider society can benefit from the opportunities a technology led economy presents.

The survey identified that over a third (37 per cent) of young people were worried they do not have the digital skills to get a good job[23], and two fifths (41 per cent) said they were unsure or did not feel confident making choices about the skills they needed to future proof their career. This was most likely in those who haven't pursued a digital related subject in Ks4 and who are NEET.

Despite this, it also revealed that that the overwhelming majority of young people are open to developing their digital skills, with only 6 per cent stating they would not be interested in any form of training. Almost four in five young people said they would be interested in training or retraining in either basic (79 per cent), or advanced digital skills (79 per cent). Those who did not study a relevant 'digital or tech' subject at Ks4, alongside NEET young people were less likely to be interested in training, but even a substantial majority of these groups were open to it.

Despite this appetite to learn, there is a significant difference in the uptake of training. Only one in five (19 per cent) young people had completed a relevant paid for training course, with less than half (44 per cent) completing a relevant free course. NEET young people and those who had not studied a relevant subject after Ks3 were less likely to have completed a course, compared to peers.

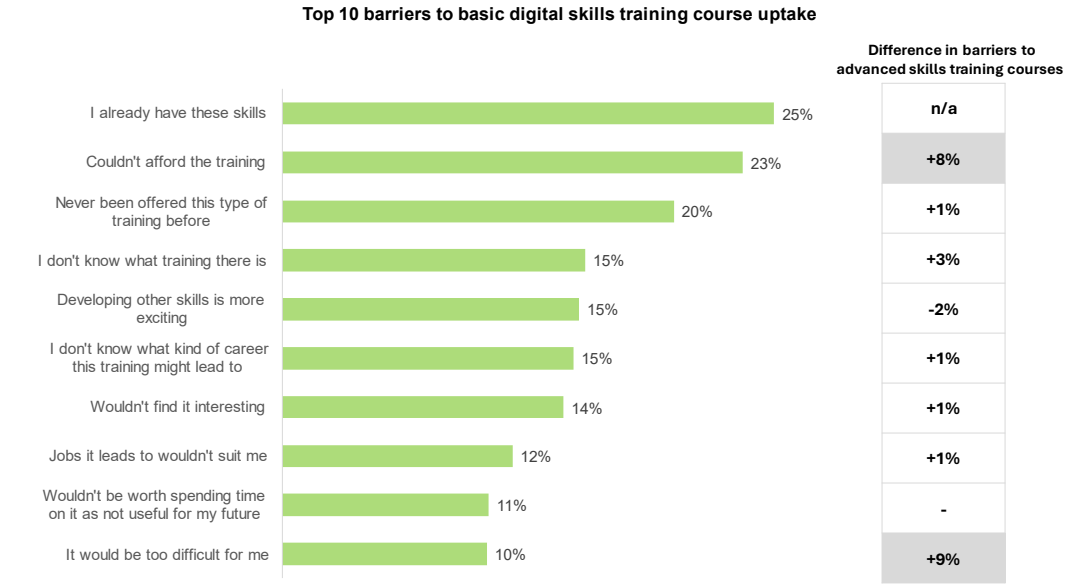
Differences in the uptake and interest in digital skills training



Survey questions: How interested, if at all, would you be in training or retraining in the Basic digital skills / Advanced Digital skills? | Have you done any of the following to develop your own digital skills?

The survey data suggests that this difference is due to a combination of key factors identified throughout this report, ranging from a lack of awareness about what training is available or how it applies to future careers, to low confidence and financial challenges.

[23] A further 36% of respondents disagreed/strongly disagreed and 27% were neutral to the statement *"I am worried that I don't have the digital skills needed to get a good job"*



Survey questions: What, if anything, would be barriers to you training in basic digital skills? | What, if anything, would be barriers to you training in advanced digital skills? (I already have these skills not included in advanced digital skills)

Our research suggests that to address this gap, training should be linked to the 'jobs first' mindset which emerged consistently in focus groups, via which young people decide what jobs are of interest to them, before determining what skills and training they need to pursue this.

> *"They need to tell you where it can lead to and what you are going to get from completing it – what are the benefits? What jobs might you get?" (19-23, female, NEET)*

> *"Would be good to know how it [training course] would help in the types of jobs that I am interested in but also giving ideas when still a person trying to decide what to do next…" (24-30, male, NEET)*

> *"We are in the dark about what to do to get to where we want to be." (19-23, female, NEET)*

> *"Didn't know there was such a wide variety of jobs in the media industry. Didn't know that companies outsource for adverts, had no idea how it all works." (Prince's Trust course attendee, London)*

> *"Make clear the stages you go through and the things that they will expect you to already be able to do." (19-23, female, employed under 20 hours)*

> *"They need to lay it out like a train, so you can see where you are getting on at based on what you already know and where you are going with it." (19-23, female, NEET)*

> *"There are so many roles out there, that you wouldn't even think of." (Prince's Trust course attendee, London)*

Conclusion

Despite the substantial challenges presented throughout this research, these findings present a crucial opportunity, which if addressed, would enable young people to pursue and engage with digital skills development and training.

Working together, key stakeholders in the sector should as a priority provide practical solutions that address the lack of awareness and negative perceptions about digital careers. Building a clear link between training pathways and job opportunities would be a welcome first step, so that young people are able to see the impact undertaking training will have on their chances of securing employment. Supporting young people to overcome any financial barriers in accessing training is also crucial.

Doing so would not only ensure young people can benefit from the transition to a technology led economy, but also address the developing, and increasing digital skills gap.

Recommendations

The analysis of our research provides clear evidence that young people will need substantial support to secure meaningful work, as the economy and employment landscape rapidly evolves around them.

Action is needed to raise awareness of the plethora of digital skills needed for their future careers, the broad range of roles emerging and the benefits these jobs can provide. Creating pathways and providing support to improve access to relevant training opportunities and these careers is equally crucial.

This report outlines several practical steps that educators, employers, third sector organisations and government can take to reduce the barriers identified.

With collaborative action, we can not only address the digital skills gap, but ultimately ensure young people can access and take advantage of the significant opportunities a technology led economy can provide them, alongside the UK economy and broader society.

Educators

- **Integrate learning of practical digital skills across the curriculum** – Schools and further education providers should be supported to embed and deliver an integrated approach to learning digital skills across the curriculum, ensuring it is accessible for all young people from an early age and throughout their education. Delivery should focus on practical learning rather than theory based, helping to generate interest, engagement and relatability.
- **Improve awareness of digital skills needed for future careers before Ks4 subject choices** – Develop curriculum so that it helps increase awareness about the importance of digital skills to employment and provides clear pathways to pursuing digital careers, prior to young people making subject choices for Ks4. This includes offering guidance on the courses and qualifications needed, alongside the availability and broad range of potential career opportunities. Emphasising that digital skills can be learnt by everyone, and that relevant careers are accessible to all is crucial within this approach.
- **Engage with employers to expand access to role models -** Engaging with employers, such as partnerships with local business and technology based companies can improve access to role models working in digitally enabled jobs, while also providing practical insights and experiences. Offering experiences like mentoring and work placements will help with addressing negative stereotypes and to build interest in future career opportunities, while ensuring young people secure practical experience of working in a technology led economy.

Employers

- **Clarify ‘key’ digital skills expectations and evaluate entry level jobs** - Collaborate with government, educators, and third-sector organisations to clarify core digital skills needed for young people entering the workplace. Clear communication about the skills

required and the benefits of these roles can increase interest among young people. Evaluate entry level jobs to ensure that they are accessible and appealing to a diverse range of young people.

- **Invest in upskilling young people and co-delivery of training** - Support educators, training providers and relevant third-party organisations, financially and through co-delivery to provide training that is free to access, and which delivers, practical learning and experiences relevant to future employers.
- **Highlight workplace diversity and benefits of digitally enabled jobs –** When promoting digitally enabled jobs to young people, highlight the diversity of people involved, including the variety of educational backgrounds. To positively shift perceptions of digital jobs, place an emphasis on the creativity, progression, flexibility, and financial security these careers can provide, alongside a focus on improving awareness about the benefits these roles provide to society.

Third sector organisations

- **Raise awareness of and build confidence with digital skills** - Charities should utilise links to focus on engaging young people who already face challenges accessing employment, to raise awareness about the need for digital skills in future careers. Help to build confidence in their ability to learn these skills.
- **Provide free, practical and high-quality learning opportunities** - Collaborate with employers to ensure that all young people have access to free, high quality, practical experiences and learning that helps to develop digital skills which are in demand, and which could lead to positive employment outcomes.
- **Support young people to overcome practical barriers to training** - Charities delivering skills development courses should focus on helping young people overcome their practical barriers to engaging in training, with a focus on those with a lack of constant, quality broadband and/or lack of access to suitable devices or software. Flexible opportunities are also needed to engage those young people who want to upskill, but already have commitments that would make engaging in intensive courses difficult.

Government

- **Develop a consistent digital skills taxonomy –** Working with industry and educators**,** lead a project to deliver a consistent and clear taxonomy of digital skills, which maps digital skills to jobs and career pathways. It should clearly set out which skills are of use to which sectors, and signpost to young people how different training routes and qualifications open these opportunities.
- **Create tools for assessing and developing digital skills -** Support a collaborative project to develop tools that help young people assess their digital skills level and identify gaps. These tools should be easily accessible and promoted throughout education to support ongoing skills development.

- **Develop flexible digital skills pathways to employment –** Develop a strategic plan for a broad range of digital skills development pathways, ensuring these are accessible to young people from all backgrounds. Work with industry to ensure that their needs can be met and fund training programmes offering increased flexibility with digital skills development pathways, which sit alongside existing successful routes.

Appendix

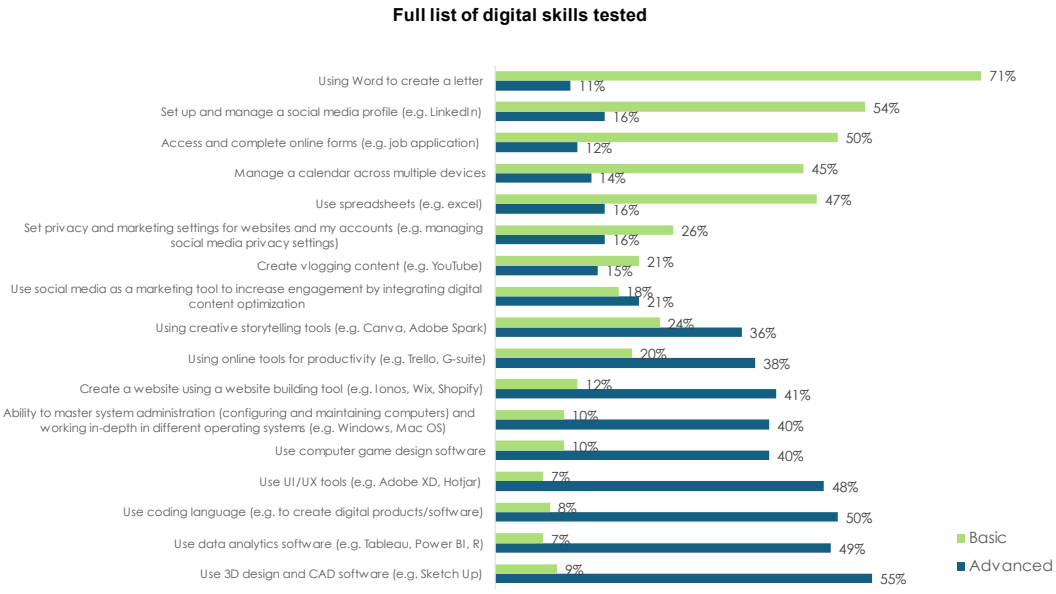
Skills included in survey questions

- Using Word to create a letter
- Access and complete online forms (e.g. job application)
- Manage a calendar across multiple devices
- Create vlogging content (e.g. YouTube)
- Set up and manage a social media profile (e.g. LinkedIn)
- Use spreadsheets (e.g. excel)
- Set privacy and marketing settings for websites and my accounts (e.g. managing social media privacy settings)
- Use social media as a marketing tool to increase engagement by integrating digital content optimization
- Using creative storytelling tools (e.g. Canva, Adobe Spark)
- Using online tools for productivity (e.g. Trello, G-suite)
- Use computer game design software
- Ability to master system administration (configuring and maintaining computers) and working in-depth in different operating systems (e.g. Windows, Mac OS)
- Create a website using a website building tool (e.g. Ionos, Wix, Shopify)

Roles included in survey questions

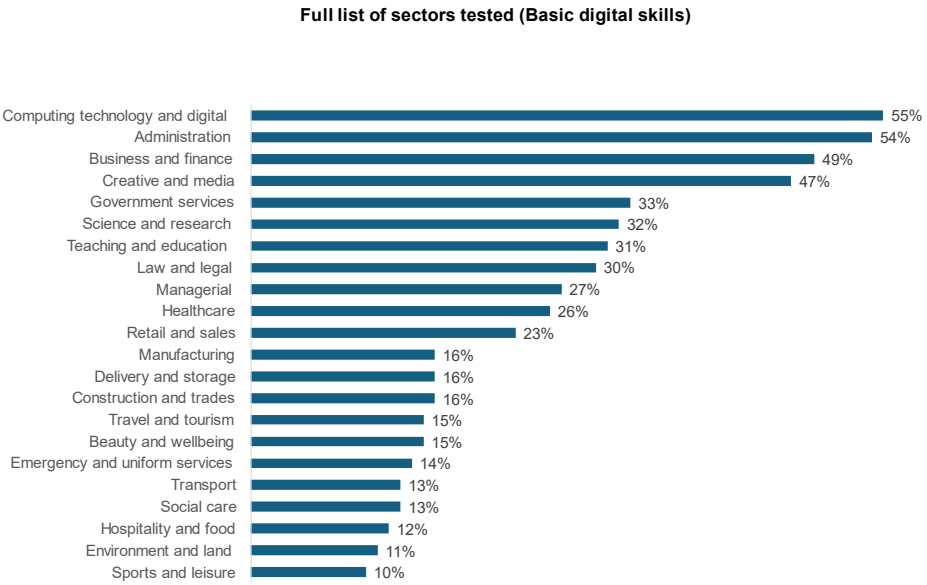
- App Developer - design and build mobile applications for computers/mobiles
- Computer Games Developer - create video games
- Cyber Security Analyst - protect organisation's computer systems/networks/data from threats
- Data Analyst - collects, cleans, and interprets data sets to answer questions or solve problems
- IT Support Technician - identify and solve problems on computers
- Social Media Specialist - communicate with customers and clients through social media channels
- Vlogger - create and post videos online
- Web Designer -design new websites or redesign existing ones
- Artificial Intelligence Engineer - develop and train artificial intelligence
- Digital Marketing Assistant - activities relating to online marketing campaigns including analysing data
- Software Developer - design, build and test computer programmes
- Data Entry Clerk/Administrator - types information into databases and systems
- Robotics Engineer - design and build machines to do automated jobs
- Customer Call Centre Operator - answer enquiries from customers by telephone, email, webchat, or text
- Use UI/UX tools (e.g. Adobe XD, Hotjar)
- Use data analytics software (e.g. Tableau, Power BI, R)
- Use coding language (e.g. to create digital products/software)
- Use 3D design and CAD software (e.g. Sketch Up)

Survey data on full list of digital skills



Survey questions: Which of the following do you consider to be Basic digital skills? |Which of the following do you consider to be Advanced digital skills?

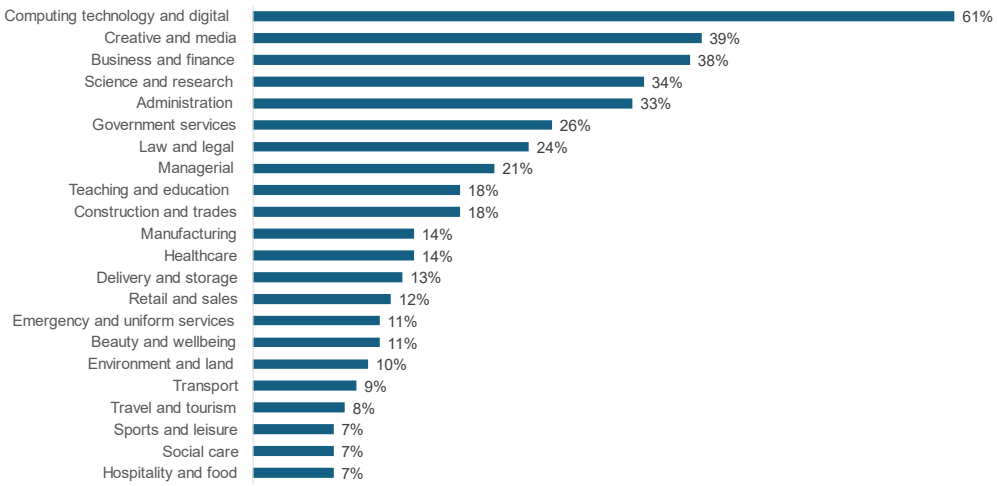
Survey data on sectors most important to have basic digital skills



Which of the following areas do you think it would be most important to have these Basic Digital Skills to secure a job?
Base: All respondents (n=2001)
*Basic based on own definition of which skills belong to basic from those presented in poll.

Survey data on sectors most important to have advanced digital skills

Full list of sectors tested (Advanced digital skills)



Which of the following areas do you think it would be most important to have these Advanced Digital Skills to secure a job?
Base: All respondents (n=2001)
*advanced based on own definition of which skills belong to advanced from those presented in poll.