

Developing essential digital skills



Around a fifth of the UK population do not have essential digital skills for life as defined by the UK Government. This POSTnote gives an overview of digital skills in the UK, the impact of a lack of digital skills on outcomes in areas such as employment and health, and initiatives in place to improve digital skills.

Background

Digital skills range from basic skills such as those needed to carry out an internet search, to advanced technical skills required for specialised work. Basic digital skills are becoming a near-universal requirement for day-to-day life, including for communication, accessing services and employment.² An analysis of 9.4 million UK job advertisements found that 77% of openings requested basic digital skills.³

While research suggests the number of people with basic digital skills has increased in recent years,⁴⁻⁷ concerns remain about those who lack them.^{8,9} Good Things Foundation (a UK digital inclusion charity) and others have highlighted that digitally excluded people may experience negative impacts, including poorer health outcomes and social isolation.¹⁰

The digital skills gap also has implications for the UK labour market.^{11,12} A 2020 survey of UK businesses found that 69% believed that their company had a digital skills gap and 44% were worried that this would have a negative impact on their success in the next 12 months.¹³ A 2018 analysis estimated that failing to close the digital skills gap could cost the UK up to £141 billion in GDP growth by 2028.¹⁴ While the UK has a strong technology sector, reports have found that it ranks less well in terms of digital skills: a 2018 World Economic Forum report found that the UK ranked 32nd out of 140 countries for its population's digital skill level.¹⁵

Overview

- Certain groups are less likely to have digital skills than others including older people and those in lower socioeconomic groups.
- Digital skills are associated with benefits for individuals and the economy, including improved employment prospects, financial capability and better health outcomes.
- Strategies to improve digital skills in the UK include teaching in schools and adult upskilling and reskilling programmes.
- The Government recently launched new digital skills qualifications, which it funds for adults who have low or no digital skills.
- The Government plans to launch an updated digital strategy in 2021.¹ Building a skilled digital workforce will be a key area of it.

The UK Government has launched several recent initiatives to improve digital skills in the UK. In 2018 it published its Essential Digital Skills (EDS) framework (Box 1), which outlined five categories of digital skills needed for life and work.¹⁶ In 2020, it launched new EDS qualifications, which adults lacking basic digital skills can undertake for free.¹⁷

This POSTnote focuses on basic digital skills required for everyday life, rather than advanced technical skills. It is important to note that while this note focuses on digital skills, a lack of digital skills may be one of several factors contributing to digital exclusion in society more widely. Other factors include financial limitations and a lack access to digital technology.

The UK digital skills landscape

No universal definition of digital skills exists. However, they can be broadly defined as the skills needed to use computers and other digital technologies to carry out activities and achieve outcomes including communicating, managing information and accessing services.¹⁸⁻²¹ Most studies of digital skills are based on surveys where participants self-report their skill level and abilities. This poses some challenges because surveys are susceptible to [response bias](#). No single survey gives a complete picture of the state of digital skills in the UK.^{22,23}

The Lloyds Bank Consumer Digital Index ('the Index') is an annual study of UK digital skills, which includes a measurement of skills against the EDS framework (Box 1).^{4,16} The 2020 Index

surveyed 4233 people and found that 22% did not have 'essential digital skills for life' (Box 1), and 16% could not carry out a full set of the 'foundation' digital tasks that underpin the framework (such as the ability to use a web browser).⁴ The Office for National Statistics (ONS) and Ofcom (the UK telecoms regulator) both collect data on type and frequency of internet use.²⁴⁻²⁷ An Ofcom survey carried out between October 2020 and January 2021 found that 12% of respondents said that they did not spend any time online in a typical week.²⁸

Inequalities in digital skills

Certain groups are less likely to have digital skills than others. The main factors correlated with digital skill level are:^{4,28-30}

- **Age:** Age is the main factor, with older people more likely to have no or limited digital skills. The 2020 Index found that 46% of people aged 65+ had essential digital skills for life, compared with 96% of people in the 15-24 age group.³¹
- **Socioeconomic status:** Those with fewer digital skills are more likely to be in lower socioeconomic groups. The 2020 Index found that 95% of those with an annual household income of over £50,000 had essential digital skills for life, compared with 64% of people with a household income under £17,499.³¹
- **Location:** Digital skills levels vary regionally across the UK. The 2020 Index found that in London, 82% of those age 15+ had essential digital skills for life, compared to 73% in the East Midlands and 67% in Wales.³¹
- **Education:** Those without formal qualifications are less likely to have digital skills for life than those who have them. The 2020 Index found that 93% of people with a university degree, masters or PhD had essential digital skills for life, compared with 34% of those with no formal qualifications.³¹
- **Disability:** Disabled people are less likely to have basic digital skills than those who do not.^{24,32} A 2020 ONS survey found that 81.4% of disabled respondents were recent internet users (had used it within the last 3 months) compared with 97.5% of non-disabled respondents.³³

Barriers to digital skills

There may be a number of barriers to obtaining digital skills. These include lack of motivation or perceived need for them,³⁴ a lack of trust in digital technologies and the internet (for example, fear of fraud), a lack of support with learning digital skills and lack of access to the required devices and internet connectivity.^{29,34-36} An Ofcom survey carried out between February and March 2021 found that 6% of respondents did not have home internet access.³⁷ This rose to 28% for those with an annual household income less than £15,500.³⁷ It also found that 7% of respondents did not have home access to a PC, laptop, netbook, tablet or smartphone.³⁷ Many stakeholders highlight that access to devices is essential for building digital skills and inclusion.^{35,38-40} Some barriers to accessing devices include cost or uncertainty about what devices are suitable.

Although younger people are much more likely to have digital skills than older people,⁴ some stakeholders have expressed concerns that referring to young people as 'digital natives' (very familiar with technology and the internet) can be misleading,⁴¹ as it may risk overlooking disadvantaged young people who face barriers such as poor device and internet access.⁴²⁻⁴⁴

Additionally, young people and those in lower socioeconomic groups are more likely to only use a smartphone to go online,²⁸ which may limit some digital skills and affect critical engagement.^{28,45,46}

Box 1: The Essential Digital Skills (EDS) framework

The Government's EDS framework was published in 2018.¹⁶ It outlines five categories of digital skills and the tasks within each category that an individual needs in order to be classed as having digital skills for life or digital skills for work:

- **Communicating:** the skills required to communicate, collaborate, and share information, for example by using word processing software and sending emails.
- **Handling information and content:** the skills required to find, manage and store digital information and content securely, for example, the ability to use search engines and the skills to assess the reliability of internet content.
- **Transacting:** the skills required to register and apply for services, buy and sell goods and services, and manage transactions online. For example, the ability to book and pay for travel tickets online.
- **Problem Solving:** the skills required to find solutions to problems using digital tools and online services, for example, using an online live chat facility to fix an issue, or using a tutorial video to learn how to do something.
- **Being safe and legal online:** the skills required to stay safe, legal and confident online, for example controlling privacy settings on social media and recognising suspicious links in emails.

The framework also outlines a set of 'foundation' digital skills. These are basic abilities that underpin the essential digital skills and include the ability to do tasks such as turning on a device and connecting to a Wi-Fi network. A person who has **essential digital skills for life** can perform all tasks in the foundation level and at least one task from each of the five skills categories.

Impact of COVID-19

Concerns about the digital skills gap have been particularly acute during the COVID-19 pandemic as people have been more reliant on digital skills for work, accessing education and services, and socialising with friends and family.⁴⁷⁻⁵⁰ The 2020 Index looked at attitudes to digital skills during the pandemic. It found that 78% of respondents agreed that the pandemic had increased the need for digital skills.⁴ Age UK reported that 17% of people aged 75+ wanted to use the internet more frequently or for more tasks during the pandemic, but 79% of those lacked the digital skills to do so.⁵¹ More broadly, experts have raised concerns that the pandemic will [exacerbate skills gaps and widen workforce inequalities](#).

Impact of digital skills

Digital skills are associated with a number of positive outcomes for both individuals and the wider economy.⁵²⁻⁵⁵ A 2018 study commissioned by Good Things Foundation estimated that the UK could benefit from £15 for every £1 invested in digital skills.⁵² The impacts of digital skills on outcomes include benefits for employment, earnings, personal finance, access to government services, health, and community engagement.

Employment

Digital skills are increasingly important for employment. Many jobs that traditionally did not require digital skills now require some level of engagement with digital technology.^{2,54,56}

Evidence suggests that for those already in employment, digital skills can improve an individual's capability and efficiency at work, and lower the risk of job loss due to automation.^{3,18,57,58} For those who are unemployed, digital skills can help people to find work and improve their employment prospects. For example, the ability to search and apply for jobs online allows jobseekers to find a wider range of vacancies.⁵⁹ Digital skills can allow people to adopt more flexible working arrangements via remote working and distance learning ([POSTnote 639](#)).

Various industry stakeholders have raised concerns about the lack of basic digital skills among the UK workforce. A 2019 Government survey found that 28% of skills gaps within the workforce involved a lack of basic digital skills.⁶⁰ Some companies have set up schemes to upskill their staff (see later).

Earnings

Evidence shows that digital skills are associated with higher earnings.^{3,52} For example, an analysis of 9.4 million UK job advertisements posted in the 12 months up to March 2018 found that roles requiring digital skills paid 29% more than those that did not.³⁴ Increased individual income associated with improved digital skills also has wider economic benefits through enabling more personal spending. A 2018 study commissioned by Good Things Foundation estimated that boosting digital skills in the UK could equate to a £571 million earnings benefit to the economy by 2028.⁵²

Personal finance

Digital skills and access to the internet can have substantial financial benefits. These include allowing people to manage their money through online banking, accessing financial and debt advice, saving money through online shopping and using online tools to compare the prices of goods and services.⁸

The 2020 Index found that, within the £20,000+ income bracket, people who were rated as having a 'very low' digital engagement spent an average of £564 per year more on bills than those whose engagement was rated as 'very high'.⁴ People with a higher level of digital skills are more likely to be able to recognise and take steps to protect themselves against scams.⁶¹ Age UK has expressed concerns about older people (who are generally less digitally skilled) being disproportionately targeted by scams.⁶² For more on scams and the impact of digital payments on digital exclusion see [CBP-8545](#) and [CBP-9054](#).

Access to Government support services

Over the last decade, the UK Government has increasingly been encouraging people to access its services online.^{63,64} However, research shows that the people most likely to require Government support services are often from groups with lower levels of digital skills.⁶⁵ Council services have been highlighted as one of the most inaccessible services for those who lack digital skills. In a 2018 mystery shopping exercise, Age UK found that 41 out of the 100 English local councils contacted for the study said housing benefit and council tax reduction had to be claimed online.⁶⁶ Research by the Government Digital Service found that 30% of Universal Credit claimants were not able to set up an online account to verify their identity.⁶⁷ There are concerns that pressure to use online services could lead to people not claiming benefits that they are entitled to.^{65,68}

Health and wellbeing

Offering health and wellbeing services online can be more convenient for users, reduce demand on services and help make cost savings.⁶⁹ The COVID-19 pandemic has meant that many healthcare appointments are now being carried out virtually by phone or video call. Digitally excluded people are at risk of worse health outcomes and worse access to healthcare services.⁷⁰⁻⁷² Since 2013, Good Things Foundation have run the Widening Digital Participation programme in England, funded by NHS Digital, to try to give people the skills and confidence needed to access health information and services online.⁷³

Communication and social engagement

Digital skills offer a wide range of ways to communicate with friends and family and can facilitate social and community engagement.⁷⁴ There are concerns that those without digital skills are at greater risk of social exclusion and may not be able to access support networks as readily. This has been a particular concern during the pandemic, with many social and community activities moving online. The 2020 Index found that 54% of respondents agreed that knowing how to video chat and use social media was a key skill during lockdown.⁴

Reducing the digital skills gap

Approaches to improving digital skills in the UK include education for young people in schools and programmes that take place outside of the education system aimed at upskilling and reskilling adults. There are also initiatives aimed at improving access to digital devices and internet connectivity, which are key barriers to digital skills and inclusion.

Responsibility for digital skills policy is split between the DfE and DCMS. Some groups, including the CBI and Lloyds Bank,⁵⁴ have called for more formal collaboration across government departments to allow for a more unified policy approach. The Government has committed to updating its 2017 digital strategy in 2021.⁷⁵ It has said that building a skilled digital workforce will be a key area of the new strategy.^{1,76}

Digital skills education in schools

Digital skills teaching differs across the UK (Box 2). This section focuses on digital skills teaching in England.

Digital skills in the curriculum

Digital skills are taught specifically within computing lessons, although aspects of digital skills feature in other parts of the curriculum such as in relationships and sex education ([POSTnote 576](#)).⁷⁷ The computing curriculum is mandatory in local authority-maintained schools from ages 5 to 16.^{78,79} It focuses on the fundamentals of computer science, but also aims to ensure that pupils are able to use information and communication technology 'at a suitable level for the workplace and as active participants in a digital world'.⁷⁹

Some research has found that teachers are concerned that the computing curriculum is overly-focussed on computer science and that there is a lack of basic digital skills development.⁸⁰ Others stakeholders have raised concerns that digital skills do not feature explicitly in Ofsted's inspection framework.^{18,81-83} Further challenges include a shortage of qualified computing teachers and a low uptake of computing qualifications.⁸⁴⁻⁸⁸

The National Centre for Computing Education was created in 2018 with funding from DfE to provide training and resources for computing teachers.^{89–92} Many stakeholders advocate a 'whole school' approach to teaching digital skills, where they are embedded across the whole curriculum.^{40,77,93,94} This may involve wider integration of technology within schools. However, evidence on the impact of increased school use of technology on digital skills is unclear.^{95,96} A 2019 report by the Nuffield Foundation found that putting computers into schools did not guarantee a positive impact on digital skills. It also reported that there is a lack of consensus on the effective use of digital technologies in teaching and learning.⁹⁷

Box 2: Digital skills curricula in the devolved nations

Scotland

The Curriculum for Excellence is the Scottish curriculum for those aged 3-18. One of the eight curriculum areas is 'technologies' and within this subject, ICT and computing science are two areas of work.⁹⁸

Wales

Wales introduced a new 'Curriculum for Wales' in 2020,⁹⁹ to be implemented in 2022 for those age 3-16. The new curriculum specifies mandatory skills that must be embedded across the curriculum, one of which is 'digital competence.' Computer science can also be taken as a specific subject.

Northern Ireland

'Using ICT' is one of three core skills embedded across the curriculum in Northern Ireland at primary and secondary level.¹⁰⁰ Students can take 'Digital Technology' as a GCSE, in which they can specialise in multimedia or programming.¹⁰¹

Adult upskilling and reskilling

It can be harder to access digital skills training after leaving formal education. However, various organisations run initiatives aimed at digitally upskilling adults.^{102,103} FutureDotNow, a coalition of organisations working to boost the UK's digital skills, maintains a directory of UK digital skills programmes.¹⁰⁴

Industry schemes

Research by the CBI found that 93% of businesses are taking action to address their digital skills needs, including through hiring more external talent, partnering with SMEs, providing training for staff and taking on more apprentices.⁵⁴ For example, Microsoft runs an apprenticeships network to connect companies with apprentices in the digital sector.¹⁰⁵ Some businesses offer their staff the opportunity to undertake formal digital skills qualifications.^{106,107} There are also some industry-led courses available to the wider public (Box 3).

Government programmes

In August 2020, the Government launched its Essential Digital Skills Qualifications (based on the EDS framework, Box 1).^{17,108} These are fully funded qualifications for adults who are inexperienced with digital devices and the internet to develop basic digital skills.¹⁷ As part of its 'Lifetime Skills Guarantee' programme, since April 2021 the Government is offering adults without any A level qualifications or equivalent to undertake a fully funded 'level 3' qualification (equivalent to A level qualifications)¹⁰⁹ from a choice of courses (including some digital-related).^{110,111} The Government is also expanding its Skills Bootcamps: the Bootcamps are short courses focused on

helping adults gain new digital and technical skills and were initially rolled out in six regions across the UK.^{110,111}

DCMS set up the Digital Skills Partnership (DSP) in 2017 aiming to bring together public, private and charity sector organisations to improve digital skills in the UK.^{112,113} This includes work in local areas through the local digital skills partnerships,¹¹⁴ established in seven UK regions to tackle local digital skills challenges by building partnerships between local businesses, charities and organisations.¹¹⁵

Charity and community initiatives

Some charities offer online resources to help people improve their digital skills (Box 3). Good Things Foundation coordinates the Online Centres Network, a network of 5,000 community venues (such as libraries and community centres) where people can go to get digital skills support.¹¹⁶ Some stakeholders have highlighted the importance of informal, community-based support for digital skills learning,^{117,118} with research suggesting that more informal environments can help people to overcome motivational barriers.¹¹⁹ Age UK has stated that for older adults, the best approach to learning digital skills includes ongoing, one-to-one support that is tailored to an individuals' needs.⁵¹

Box 3: Industry and charity-led programmes

Various industry and charity-led programmes exist to help boost digital skills. Examples include:

- **Accenture's Skills to Succeed Academy.** An online learning platform to help young people build their employability skills. Through partnerships with DWP and National Careers Service, the scheme has reached more than 100,000 young people in the UK.¹²⁰
- **BT's Skills for Tomorrow programme.** A programme providing free advice, information and support for 10 million people. The Skills for Tomorrow website brings together over 180 resources from BT and partners.¹²¹
- **Good Things Foundation's Learn My Way.** A website of free online courses to help people to develop their basic digital skills, including courses on creating documents, job hunting and using public services online.^{102,122}
- **Future Digital Inclusion (FDI).** A programme funded by DfE and run by Good Things Foundation to deliver basic digital skills training via community venues. A 2019 evaluation of the FDI scheme found that it had supported over 1 million people, and had been effective due to its focus on learners' individual needs and motivations.¹²³

Access to devices and internet

Devices and internet connectivity are important for learning and improving digital skills. Several technology loan schemes have been set up by local groups and charities across the UK in recent years, often targeting people vulnerable to digital exclusion. For example, some local libraries run tablet loan schemes, which are often supported with digital skills training.¹²⁴ During the pandemic, some organisations have run additional schemes to distribute devices. Everyone Connected (formerly DevicesDotNow), run by a coalition of businesses and charities, has delivered over 13,000 devices to people at risk of digital exclusion.¹²⁵ The Department for Education has a programme to distribute devices to disadvantaged school pupils and those who cannot access remote education ([see COVID-19 and the digital divide](#)).¹²⁶ The Government has committed to improving access to the internet across the UK ([see CBP-8392](#)).

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