

What is to be done about the UK's skills deficit?

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Introduction

Skills are widely talked about in policy networks and much sought after by employers. Yet at the same time, and for a prolonged period, skills deficits and mismatches have been a dominant feature of the UK economy. There are also concerns that funding and ambition don't connect with the requirements of the economy.

Part of the reason for this disconnect is that the rationale for investing heavily in skills training is viewed as a 'nice to have' or 'something policy must do' rather than seen as an existential underpinning of the economy and society. Another is the expectation that business, not government, should lead on skills.

In this white paper, we look at why skills are so important to the economy, society and individuals. Skills are absolutely critical for business growth, productivity and social justice, and in this white paper, we examine each one of these in depth.

We will begin by looking at the historical context of education and skills in the UK, followed by the three above rationales for increased investment in skills. In the conclusion, we will outline what needs to be done about the UK skills deficit, arguing that education and skills need to be at the heart of UK economic strategy and issue a call for better data to underpin skills training delivery.

1 Historical context

The question of what is to be done about skills in the UK context has been ongoing in British history. Higher education, prior to 1962, was traditionally reserved for the children of the established middle and upper classes. Most young people either graduated from school into unskilled work, joined the army or navy, or trained for a particular job role through evening classes or apprenticeships. The UK workforce had large amounts of unskilled/low-skilled jobs in heavy industry, factories and agriculture.

After 1963 and the introduction of grants and the establishment of new universities, higher education became at least more accessible to young people from diverse backgrounds.

The Open University also became a route to a degree for those working or at home. Still, there was a binary division between academic education and skills, with the distinction between universities and polytechnics. Then higher education started to expand again in the late 1980s and early 1990s, and higher education became a unified system of 'old' and 'new' universities. With the arrival of New Labour in government in 1997, a target of 50% of young people entering higher education was on the agenda.

The growth of higher education was rather haphazard, driven by popular programmes in the arts and social sciences rather than by labour market data. Nevertheless, it had a positive economic impact, regardless of media discussions of 'Mickey Mouse' media courses. For example, Holland et al.

(2013) found that a 1% rise in the number of a people with a university degree contributed to a 0.2 to 0.5% rise in productivity (cited in BIS 2015[1]).

"The growth of higher education was rather haphazard, driven by popular programmes in the arts and social sciences rather than by labour market data."



[1] https://www.gov.uk/government/publications/uk-skills-and-productivity-in-an-international-context

Higher education is often viewed as heavily academic and not equipping businesses with the skills they need. Yet it delivers many important transferrable skills. It has high-level professional training in areas like science, law and medicine. It has been a critical funnel for the creative industries, which pre-pandemic contributed £111 billion to the UK economy every year (2018 figures).

Degrees also inculcate critical 'soft' and transferrable skills such as emotional intelligence, communication, tolerance, thinking and reasoning, writing, drafting and argument. Universities also offer networking opportunities, as they increasingly bring together students from different backgrounds who may benefit from a wider life experience.

So the benefits of HE for social mobility could still be enormous, even if it is no longer guaranteed. The popular conception that university is a waste of three years is not based on evidence.

However, there are some fault lines in the structure of higher-education delivery. High fees, inadequate preparation for work for those that aren't well connected are some, though many universities have addressed this. And then there is the question of what happens to the other 50% of young people who cannot access HE, and who also did not have great opportunities for skills training either, as discussed in the Augar Review[2].

There is also an issue of keeping up – the world of work is changing rapidly, and inevitably institutions and teaching personnel may lag behind. This may be why 60% of employers gravitate towards private providers for their training needs (see page 8).

[2] https://wonkhe.com/blogs/the-augar-review-the-essential-overview-for-he/

In recent years there has been a necessary pivot back to skills and the 'forgotten 50%' – including apprenticeships, online training conglomerates, and a host of smaller-scale government projects. And it is important to note that much of what is regarded as skills training is not hard skills at all, but a mixture of hard, soft and transferrable skills (look at any apprenticeship standard, for example).

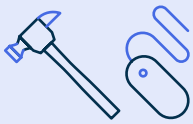
So 'academic' education and skills aren't as distinct as they might seem to policymakers. Each approach can have a mixture of both; there should be nothing mutually exclusive about academic and skills training. Higher education versus vocational training should not be a seesaw of effort or an expression of a class or status divide. Both have a role to play in increasing skills.

The issue is about how learners can progress from academic to vocational learning, and vice versa, creating a culture of lifelong learning and a ladder of opportunity.

"In recent years there has been a necessary pivot back to skills and the 'forgotten 50%' – including apprenticeships, online training conglomerates, and a host of smaller-scale government projects."

The state of skills in the UK

Skills and training deficits



In 2019 a quarter of all vacancies are skills-deficit related, with 60% of these in medium- and high-skilled roles.

Percentage of employees not proficient in their jobs because of skills gaps rose from 4.3% in 2017 to 4.5% in 2019.

Total training days by employers for employees fell by 8.3% since 2015.

Of employers who offer off-the-job training (31%), 60% use commercial providers rather than FE/HE, leading to questions of relevance.

Only 10% of employers offer apprenticeships.

Source: DfE Employer Skills Survey, 2020

Skills shortages



60% of employers say they can't attract workers with the skills they need, despite increased pandemic redundancies.

Digital skills are in increased demand because of the pandemic, yet there is no corresponding increase in employee skills in this area.

Key focus (40%) on need for management and leadership skills, rather than industry-specific skills.

Source: Open University Business Barometer, 2020[3].

[3] hhttp://www.open.ac.uk/business/barometer-2020

The state of skills in the UK

Educational attainment rising, particularly proportion of adults with degrees



But:
Poor literacy and numeracy in many young adults.

Skills mismatch in the UK, with 40% of workers either over- or under-qualified for their jobs.

Skills shortages in jobs relating to education and training, health services and STEM.

Need to align skills shortages with skills supply through better data.

High levels of unskilled jobs and low levels of skilled jobs compared to supply (only one third of jobs require a tertiary education) compared to other OECD countries, pointing to a need for better economic as well as skills policies.

Source: OECD, Getting skills right: United Kingdom, 2017[4].

[4] https://read.oecd-ilibrary.org/employment/getting-skills-right-united-kingdom_9789264280489-en

Future of work



As a result of long-term trends and the pandemic:

84%
will accelerate the digitalisation of work processes.

83%
will provide greater opportunities for remote working.

50%
will accelerate automation of tasks.

But:
Only 35% will accelerate implementation of upskilling/ reskilling programmes.

More employers will permanently (13%) or temporarily (28%) reduce workforce than temporarily (5%) or permanently (1%) increase their workforce.

The state of skills in the UK

Saadia Zahidi, Managing Director, World Economic Forum, said: "*Accelerating automation and the fallout from the Covid-19 recession has deepened existing inequalities across labour markets and reversed gains in employment made since the global financial crisis in 2007-2008. It's a double disruption scenario that presents another hurdle for workers in this difficult time.*"

Source: World Economic Forum, Future of Jobs Report, 2020[5]

Digital skills



11.7m

people in the UK lack essential digital skills needed for day-to-day life.

13.5m

were unable to use video-calling apps.

Age is a significant indicator of digital skills, with only 7% of over-70s able to shop and bank online.

Strong correlation between digital exclusion and most vulnerable/disadvantaged:

"*People with an annual household income of £50,000 or more are 40% more likely to have Foundation digital skills, than those earning less than £17,499... four in 10 benefit claimants have very low digital engagement.*"

[5] https://www.weforum.org/reports/the-future-of-jobs-report-2020

The state of skills in the UK

Digital exclusion affects:

- Employment opportunities.
- Wage levels.
- Health and life management.
- Social connections.

But one in three people have used the lockdown to improve their digital skills.

Source: Lloyds Bank UK Consumer Index, 2020[6].

Learning participation and inequality



Participation in learning has fallen from a high point of 46% in 2001 to 33% in 2019.

Inequality in learning participation is acute, with 57% of the AB income group participating compared to 29% of the DE income group.

Participation declines with age, with 61% of 18- to 19-year-olds and 50% of 35- to 44-year-olds participating compared to 39% of 55- to 64-year-olds and 17% of over-75s.

Source: Time for action: Skills for economic growth and social justice, L&W, 2019[7]

[6] https://www.weforum.org/reports/the-future-of-jobs-report-2020

[7] https://learningandwork.org.uk/wp-content/uploads/2020/02/Time-for-Action-Skills-for-economic-growth-and-social-justice.pdf

The state of skills in the UK

State of the economy

- UK GDP shrank by 9.9% in 2020, the biggest fall in 300 years (though grew by 1% in the last quarter of 2020).
- The impact of Brexit on trade has not yet been fully realised, although businesses are struggling to export.
- Nearly five million people were still furloughed up to the end of February 2020 (ONS).
- 45% of businesses currently trading and 66% of temporarily paused/closed companies have cash reserves of less than six months (ONS).
- Immigration is undergoing rapid changes, potentially leading to skills shortages.
- Impact on jobs, investment in skills, and innovation/business capability of pandemic and Brexit still unknown.

Young people, women and BAME individuals have been particularly affected by the pandemic, pointing to a crisis in social justice and has long-term detrimental consequences for the economy.

9.9%

UK GDP shrank by 9.9% in 2020, the biggest fall in 300 years

2 Why do skills matter?

When looking at the question of why skills matter, the answer seems obvious – it matters to the economy and it improves life chances. But rarely is this statement underpinned by elucidation or evidence.

Take the Education Minister Gavin Williamson's well-meaning foreword to the Skills for Jobs white paper. It mentions that skills offer both "*opportunity*" for every individual to "*level up every inch of the country*" and "*a skills gap that is holding us back economically*". And that perspective is entirely right. But we need to fully explain why skills don't just matter, but are also existentially critical to the survival of the economy. An example is the green economy, where initiatives have to be backed by skills training to ensure the skills needs of these budding industries are met, from innovation to installation.

This white paper argues there are three core reasons why skills matter: business growth, economic productivity and growth, and social justice. We will look at each of these in turn.

2.1 Business growth

Put simply, without skilled people, certain sectors critical to global economic success (innovation, creativity, technology, engineering, construction) cannot grow.

While high-skill jobs have been increasing in the UK in the long term, the country also has a relatively high level of unskilled jobs compared to similar nations, and over the past two decades, its share of unskilled jobs has increased. Indeed, one longitudinal report[8] suggested that for every 10 medium-skilled jobs that disappeared in the UK between

[8] https://www.ft.com/content/6a8544ae-9d9e-11e4-8ea3-00144feabdc0



1996 and 2008, about 4.5 of the replacement jobs were high-skilled and 5.5 were low-skilled.

Until 2012, many low-skilled jobs were being filled by overseas nationals; however, after 2012 and the tightening of immigration rules, lower-skilled employment began to rise among UK nationals (Source: Campbell et al. 2014, Employment and occupational skill levels among UK and foreign nationals[9]). Tony Wilson, Director of the Institute for Employment Studies, has also referred to post-pandemic rise in 'second choice' jobs where skilled people have taken unskilled work.

An Office for National Statistics report[10] in 2016 suggested that 15% of UK nationals and 20% of foreign nationals were in jobs they were overqualified for, while the figures on our table on page 9 say 40% of the UK workforce are either under- or over-qualified for their jobs. All of this suggests a problem in the labour market with high numbers of unskilled jobs and skills mismatches, hardly ideal as the UK prepares for the fourth industrial, tech, revolution.

As soon as the UK moved from its reliance on heavy industry, our skills training system became no longer fit for purpose. Expanding higher education inculcated populations with great transferable skills, as this report

[9] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/282503/occ108.pdf

[10] https://www.ons.gov.uk//peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/migrationandthelabourmarketuk/2016

has already explored, as well as vocational skills, and the UK has benefitted from an influx of highly skilled overseas nationals, and free movement within Europe.

But business growth in innovation sectors has tended to follow a pattern of urban concentration, a process has been documented in the US by economics professor Enrico Moretti[11] and in the UK by the Centre for Cities[12]. The greater skills levels in cities encourage high-skill industries to locate there, leaving rural areas and towns lagging behind (except for public-sector jobs). A report by the UK Commission for Employment and Skills in 2014[13] charted the acute regional disparities in skills levels in the UK: 49.1% of London residents had a Level 4 qualification or above, compared to 22.1% in the Black Country, while the percentage with no qualifications was over twice as high in the Black Country compared to London.

Towns and rural areas can feed off nearby big cities, but that depends on proximity. This process explains the high degree of geographical inequalities that has a political impact too. Investing in skills training along with improving infrastructure can encourage business to relocate and create thriving regional economies.

Higher-skilled jobs command higher wages, which in turn, as Moretti describes, feeds the local service sector. So business growth in high-wage sectors creates economic growth. But even here, low levels of literacy, numeracy and digital skills spell trouble, hence the recent, and welcome, investment in Level 3 qualifications and the above core skills in the Plan for Jobs.

[11] https://www.gsb.stanford.edu/insights/enrico-moretti-geography-jobs

[12] https://www.centreforcities.org/publication/skills-primary-focus-industrial-strategy/

[13] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/344440/The_Labour_Market_Story-_The_State_of_UK_Skills.pdf

2.2 Productivity

It is often posited that skills improve productivity, and productivity is one of the core economic justifications for improving skills levels. But how does it do this?

A report by the Department for Business, Innovation and Skills[14] (BIS) said:

"Education and skills are important drivers of productivity. Higher levels of educational attainment and skills raise productivity directly by expanding an individual's economic capabilities – enabling them to accomplish more difficult tasks and to address more complex problems. But education and skills are also argued to raise productivity through indirect mechanisms – facilitating technological diffusion and innovation which may enable a nation to move to a higher growth path."

In other words, skills improve labour output and the ability to think of new ideas, allowing employees to produce more value and quicker, and ideas that lead to profitable innovations.

This point is confirmed in a report by Dearden, Reed and van Reen (2006)[15], which said that a 1% rise of the proportion of workers training in an industry would lead to an increased output per hour of 0.6%, with only half of the gain going to wages.

There is also a virtuous circle between productivity and many other aspects of geography, human resources, infrastructure and business, as L&W's 'five pillars of productivity shows.

[14] https://www.gov.uk/government/publications/uk-skills-and-productivity-in-an-international-context

[15] https://cep.lse.ac.uk/pubs/download/dp0674.pdf

Five pillars of productivity

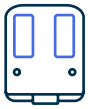
The Learning & Work Institute proposed a conceptual framework for thinking about the relationship between skills and productivity – the five pillars of productivity. If these five conditions are functioning, productivity will improve.



Ideas: Innovation and new ideas, which feed into productivity gains, cannot happen without skills.



People: People are at the heart of productivity. The UK, for example, has skills deficits in leadership and management, which affects decision making.



Infrastructure: Economies need decent infrastructure (transport, digital, energy) to grow. We can see this with broadband coverage during the pandemic, or in the area of green tech and renewables.



Business environment: Increasing numbers of skilled workers leads to more tax revenue, investment and business start ups (and the success of these).



Places: Skills can address geographical disparities in wealth and income, with better outcomes for politics and culture too. Improving skills encourages business to become more geographically dispersed, enlarging income and growth within regions. Most advocate that skills planning needs to be founded in local labour market data.

Despite improvements in access to higher education in the UK, productivity remains low compared to comparable nations such as Germany and France. Since the 2008 financial crisis, growth is slower in the UK and productivity has stalled. The UK economy is 16% smaller than it would have been had the crisis not happened (equivalent to £5,900 per person).

A report by the OECD – Getting Skills Right: United Kingdom[16] – argues that this is due to significant skills shortages and skills mismatches that show no sign of diminishing. The report says:

"The OECD Skills for Jobs database reveal shortage pressure in knowledge related to education and training, health services and STEM subjects, as well as more transversal skills like verbal abilities, quantitative



[16] https://read.oecd-ilibrary.org/employment/getting-skills-right-united-kingdom_9789264280489-en#page11

skills, complex problem solving, reasoning and social skills."

Of course, skills in themselves will not do all the heavy lifting when it comes to productivity. A study by Vandeplas and Thum-Thysen in 2019, for example, called Skills Mismatch & Productivity in the EU, also pointed to the need for a strong economy and better jobs to fully realise the benefits of skills-related productivity increases:

"*...upskilling policies should ideally be accompanied by policies that assure quality and labour market relevance of acquired skills, policies that foster a general upgrading of jobs such as business regulations allowing for firm entry, growth, sectoral reallocation, and policies supporting labour mobility and innovation.*"

The report "*argues in favour of policies aiming at upskilling of the workforce, which should ideally be accompanied by a general upgrading of jobs in order to put these higher skills in their best use.*"

The BIS report pointed to both a lack of data and activity at Level 3 and technical skills at the time of writing, a focus that has, of course, recently changed. According to L&W, improving literacy and numeracy, progressing achievement at Levels 2 and 3, and maintaining growth in Level 4 and above would boost economy by £20 billion per year (Source: Time for action: Skills for economic growth and social justice, L&W, 2019[17]).

[17] https://learningandwork.org.uk/wp-content/uploads/2020/02/Time-for-Action-Skills-for-economic-growth-and-social-justice.pdf

2.3 Social justice and mobility

In theory it is possible to organise an economy around high levels of unskilled workers. But is it right to do so? Vandeplas and Thum-Thysen argue that "human capital is a major driver of inclusive growth," meaning that investing in skills indicates an economy that is not just organised around maximising profitability, important though that is, but one that believes in the democratic inclusion of citizens in prosperity. This is the real meaning of 'levelling up'.

As L&W points out, participation rates in learning and skills have fallen to 33% in 2019 from a high point of 46% in 2001. Patterns of participation point to inequal representation, with AB participation standing at 57% and DE at 29%. There is also unequal participation by age too, with 61% participation among 18- to 19-year-olds (which is still low for this age group) compared to 39% among 55- to 64-year-olds (concerning given the likelihood of losing one's job among this group).

Improving skills can:

- Help tackle inequality, by raising income, reducing expenditure and increasing savings.
- Improve social mobility by challenging the link between educational outcomes and parental attainment, and by improving earning and employment outcomes.
- Bring wider social justice benefits: health and wellbeing, financial resilience, digital inclusion and civic participation.
- Raising income circles back into broader economic improvements through increased spending power

and savings in the health and welfare impacts of poverty and marginalisation. Says L&W: "This scenario shows that investment in learning and skills, with a focus on intermediate and basic skills, is a win-win: economic growth and social justice go hand in hand" (Source: Time for action: Skills for economic growth and social justice[18], L&W, 2019).

Skills can help with entrenched social inequalities, such as those connected with income, race, gender and regional inequalities:

- 17% of the population were in relative poverty prior to the pandemic. The Legatum Foundation estimates[19] that that figure is now 23%.

- 40% of young black people between the ages of 16 and 24 are unemployed at the time of writing, says the Office for National Statistics[20].

- A McKinsey report calculated[21] that, while women make up 39% of the global workforce, they account for 54% of pandemic job losses. According to the TUC[22], 70% of women who applied for furlough were turned down while also taking on the burden of childcare, increasing employment precariousness.

[18] https://learningandwork.org.uk/wp-content/uploads/2020/02/Time-for-Action-Skills-for-economic-growth-and-social-justice.pdf

[19] https://www.theguardian.com/society/2020/nov/30/almost-700000-driven-poverty-covid-crisis-uk-study

[20] https://www.theguardian.com/society/2021/apr/11/black-youth-unemployment-rate-brixton-riots-covid

[21] https://www.mckinsey.com/featured-insights/future-of-work/covid-19-and-gender-equality-countering-the-regressive-effects

[22] https://www.jrf.org.uk/blog/we-cannot-allow-pandemic-set-gender-parity-back-decades

- There are huge disparities in productivity[18] across the UK, with London 32% above average and Yorkshire/ Humber 17% below average. And productivity is indirectly related to wages (though there are some issues with solely using wages as a measurement of the impact of policy on productivity, as we shall see later). This is due to the tendency of industries and skilled workers to cluster, as this report examined earlier.

While skills are not the only measure required to reduce inequality, they can help to increase wages, reduce intergenerational inequalities and increase social mobility. According to L&W[23], in the UK around a half of the link between a parent's income and that of their child can be explained through education.

[23] https://learningandwork.org.uk/wp-content/uploads/2020/02/Time-for-Action-Skills-for-economic-growth-and-social-justice.pdf



3 Conclusion

Skills are one part of an economic and social strategy, as can be seen above. Without a healthy economy, the workforce can become over-skilled for what is needed. Without measures such as childcare and anti-discrimination law, it is all too easy to allow unfair practices to continue in employment, no matter how many qualifications individuals have. Without policies to uplift the regions, we will continue to see vast differences in income and wealth (although here at least skills can mitigate this, as this report has examined previously).

There are two key issues of critical importance to economic and social recovery when it comes to skills. Firstly, skills need to be centred in government strategy, as opposed to being relegated to one or two (albeit important) departments.

Moreover, if we are right in saying that skills are essential both to the economic health of the nation and to individual wellbeing and life chances, then there is a mismatch between this importance and funding. While the UK government spent[24] £92.3 billion on education in 2019/20, only around £4.4 billion of that was spent on tertiary education. While the government action plans Plan for Jobs and Skills for Jobs have, and will, put additional billions into this sector, it does not equate to its critical importance.

We can compare the overall education and tertiary spending to other spending priorities – for example, the government planned to invest £100 billion in capital investment in its 2020 Spending Review[25].

[24] https://www.statista.com/statistics/298910/united-kingdom-uk-public-sector-expenditure-education/

[25] https://www.gov.uk/government/publications/spending-review-2020-documents/spending-review-2020

Obviously, capital investment is an important aspect of economic revival, but equal attention needs to be paid to the nation's human resources. Government spending on skills lags behind France and Germany. Employers' share of training costs is also declining.

These skewed priorities needs urgent correction, particularly as the UK is losing skilled European immigrants. Since there is no ideological imperative behind not investing in education and skills, the problem may simply be an under appreciation of why skills matter. Hopefully, this white paper will help to address this gap.

The second key policy is better data. As Vandeplas and Thum-Thysen argue, better market intelligence about skills shortages can help shape skills supply. And this market intelligence needs to be aligned with job creation and investment strategies. Currently, 40% of the UK workforce is either over - or under-qualified for the work they do, and employers report critical skills shortages (see page 8). The Institute for Employment Studies argues that better data would flow from devolving skills planning to local areas.

Better data is also needed to assess productivity gains from education and vocational training, which currently rests on narrow (albeit established) criteria such as wages.

Why is that a problem? Dearden, Reed and van Reen (2006)[26] argue that relying on wage levels alone (frequently a governmental tool to assess productivity gains from training) implies a perfectly functioning market where skills and productivity gains are always rewarded by wage increases. The reality, they say, is that wages don't always match skills improvements, and so the likely

[26] https://cep.lse.ac.uk/pubs/download/dp0674.pdf

gains from skills improvements are bigger. An example is the National Audit Office's analyses of apprenticeships and productivity, where it is noted that the sole measure of productivity gains is wage rises, thus potentially underplaying how important the gains from the programme are.

The new skills white paper, Skills for Jobs, aims to "ensure government has up-to-date and expert advice on the labour market and national skills gaps from the Skills and Productivity Board". The Skills and Productivity Board was announced in September 2020 with a remit to undertake "*expert analysis of national skills needs to inform government policy*". However, there are no obvious plans to rethink how to assess productivity[27].

The UK government has made a series of policy statements and initiatives around skills, which many in the sector applaud. However, in many respects, both ideologically and in financial commitment, skills still occupy a marginal place in government plans. If the UK is to survive and thrive, that tendency needs to change, and fast. Education and skills need to be central to government plans, backed by better data to truly understand the value that skills bring.

This white paper is based on the webinar "What is to be done about the skills deficit?", hosted and presented by Dr Deborah Talbot, Education and Employment Editor at Aptem, and Dr Fiona Aldridge, Director for Policy & Research at the Learning & Work Institute, in March 2021.

[27] https://www.google.co.uk/books/edition/Measuring_Productivity_OECD_Manual_Measu/lqjWAgAAQBAJ?hl=en&gbpv=1&printsec=frontcover

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