

The great skills divide: how learning inequalities risk holding the UK back

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Millions of lost opportunities to improve qualifications are holding back economic growth and creating a “great skills divide” as a result of cuts to skills budgets.

By 2035, one in two adults will have higher education qualifications but one in three people will have low qualifications, higher than many comparator countries.

The Government has cut investment in skills in England by **£1 billion since 2010**. Employers are investing **26% less in training per employee than in 2005**.



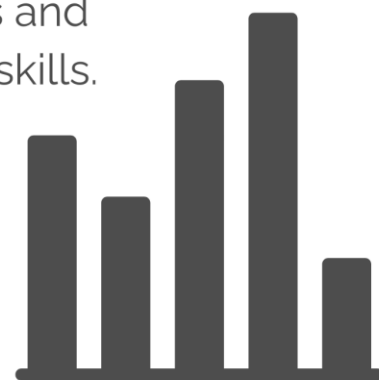
Adults have gained **7 million fewer qualifications** in the last decade than if attainment had stayed at 2010/11 levels.

This includes **2.1 million missing learners** in English and maths

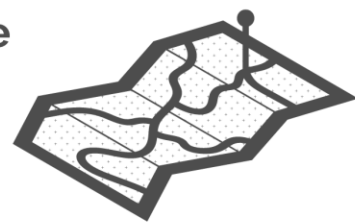


and **2.3 million missing learners** at level 2.

The UK is stalling in international rankings, on track to be **12th out of 39 OECD countries** for low qualifications by 2035, **29th** for medium skills and **10th** for high skills.



27% fewer adults in the most deprived areas are learning, while the **number of learners in the least deprived areas** has barely changed.



With an estimated opportunity cost to the economy of **£20 billion a year**, we need a higher ambition to boost social mobility and meet the rising and changing skills needs of the UK economy.

Executive summary

By 2035, one in two adults will have a higher education qualification but one in three people will have low qualifications, higher than many comparator countries. This is driven by cuts in Government and employer investment, meaning adults gained seven million fewer qualifications than if attainment had stayed at 2010 levels. Tackling this great skills divide will help us meet the needs of a changing economy and widen opportunity.

Learning and skills matter for people, employers and the economy, and have a range of economic and social benefits. Widening access to learning and skills is a necessity for most of our major challenges and to harnessing the opportunities of the 21st century.

The good news is the UK's qualification profile is improving. By 2035, almost one in two 16–64-year-olds are set to have a higher-level qualification. However, nine million adults in England have low literacy or numeracy and even by 2035 one in three people in the UK will still only have a GCSE or equivalent qualification at most.

Furthermore, the UK is running to stand still internationally: other countries are improving at least as fast and often from a higher base. The UK is therefore on track to be 12th out of 39 OECD countries for low qualifications by 2035 (compared to 13th in 2022 and behind countries including Estonia, Greece, Latvia and Poland); 29th for medium qualifications (unchanged from now); and 10th for high qualifications (down from 6th in 2022).

It is higher numbers of people with low qualifications and skills (like literacy and numeracy skills and qualified below GCSE level) plus lower numbers with intermediate (A level or equivalent) qualifications, where the UK compares most poorly to comparator countries.

Falling participation and investment in learning

80% of the UK's 2035 working-age population has already left full-time education, so falling participation in learning by adults is a key driver of the UK's projected failure to improve its relative international skills position. Adults have gained seven million fewer qualifications in the last decade than if attainment had stayed at 2010/11 levels, with the largest number of missing learners in English and maths learners (2.1 million) and at level 2 (2.3 million).

This is a product of cuts in investment in learning by the Government and employers and a limiting of the offer and learning routes. The Government has cut the adult skills budget in England by £1 billion (20%) since 2010, and refocused investment toward higher skills. Population growth means this is actually a 32% cut in per head investment, which would take £1.6 billion to reverse. These cuts have affected people living in deprived areas most: 27% fewer adults in the most deprived areas are learning, while the number of learners in the least deprived areas has barely changed. Cuts and policy shifts risk adding to, rather than tackling, the great skills divide.

Employers are also investing less, 26% less per employee compared to 2005. Graduates are three times more likely to get training at work than non-graduates, again adding to inequality of opportunity. This is the product of the external environment (low growth and economic uncertainty will have held back investment) and policy (which doesn't incentivise employers to focus investment on those with the lowest qualifications).

Our analysis shows that the net result is a slowing in the proportion of adults gaining level 2 and 3 qualifications, even while the proportion gaining level 4 and above qualifications accelerates. This risks a growing skills divide, a rising proportion at the top of the ladder and one third lacking opportunity to climb to the middle of the ladder or higher.

Taken together, fewer adults are taking part in learning and improving their qualifications, those living in the most deprived areas and with the lowest qualifications have been hardest hit, and Government and employer cuts have contributed to this.

Demand for skills

Skills needs are rising and changing. Between 2020 and 2035, the biggest number of jobs to be filled due to sectoral change and people retiring will be science, research, engineering and technology professionals (1.9 million); business, media and public service professionals (1.8 million); caring personal service occupations (1.7 million); administrative occupations (1.6 million); and health and social care associate professionals (1.2 million).

Growth is also concentrated more in higher and professional occupations, which is likely to mean an increased demand for higher level skills. Indeed projections suggest there will be 3.5 million fewer jobs needing qualifications below A level or equivalent and 6 million more jobs needing higher education qualifications. We risk a mismatch between the supply of qualifications and what our economy needs to thrive. However, natural turnover in the labour market, as people change jobs or retire, means there will be job openings across all qualification levels, sectors and occupations.

The types of skills demand are also changing. The Skills Imperative 2035 programme, funded by the Nuffield Foundation, argues that transferable essential employment skills like communication, collaboration, problem-solving, organising, planning and prioritising work, creative thinking, and information literacy will be most in demand by 2035 and also support flexibility and career change during longer working lives.

Conclusion

Learning and skills will be central to the UK's future prosperity and fairness. But the UK is treading water compared to other countries when it comes to literacy, numeracy and qualifications up to level 3.

Our economy and society increasingly need at least level 3 learning, essential skills like literacy, numeracy and digital, and to build opportunities to learn throughout life and across society. But progress has slowed over the last decade as both the Government and employers invest less. This needs to change in the decade ahead.

The context

Learning and skills have important economic, social and individual benefits. Yet for decades the UK has lagged behind comparator countries, particularly for intermediate skills. This first report of our Ambition Skills programme looks at where the UK is on track to be by 2035 and explores the changing patterns of participation in learning.

Learning and skills are crucial for life, work and society: helping our economy to grow; living standards to rise; people to be fulfilled; health and wellbeing to improve; and community engagement to increase.

For many of the main challenges of the 21st century, learning and skills will be crucial. They are an engine of growth and driver of social justice.

For that reason, it is important to understand where the UK is headed and how this compares to other countries. Our Ambition Skills programme, supported by City and Guilds and NOCN, aims to address this, identifying a higher ambition, how this can be delivered, and the economic and social benefits from doing so.

This report looks at the UK's qualifications profile, projects this forward to 2035 and compares to the trends for other countries. Qualifications are of course just one measure of learning and skills, and the outcomes of learning (economic and social) are of central importance. The overall programme takes this broader view, but ultimately qualifications are an important measure and one that allows some comparability over time and between countries. In addition, while the level of qualifications and learning matters, so does the type of qualification, quality of learning, and application of learning in life and work.

The report also looks at trends in employer demand for skills and qualifications. Employer demand for and utilisation of skills is derived from their business strategies, culture and the wider environment. The demand for and supply of skills need to be considered together: employers will design their jobs partly based on the skills available, and people will acquire skills partly based on what they think will help them gain and be successful in the jobs they want. Each do so in a world of imperfect information, both about what each other wants / has and also about what the future holds.

Future reports will consider the higher ambition for learning and skills the UK should set and the best ways to deliver it.

Projecting the UK's qualifications profile

The UK's qualifications profile is improving: by 2035 almost one in two working-age people will be qualified to higher education level. But other countries are improving too meaning the UK is on track to still lag behind on low and medium qualifications in particular. By 2035, one third of working-age adults will still only be qualified at or below GCSE or equivalent level.

The qualifications profile of the population has generally improved over time. This is largely a product of the higher qualifications of young people entering the labour force compared to those of older people leaving it, as well as qualifications gained by people as adults.

This report projects forward the UK's qualification profile for the 16–64-year-old population, using trends over the last decade for different age groups from the Labour Force Survey within the population and applying these to Office for National Statistics population projections (except for young people, who are assumed to have the same qualification profile as young people today).

Qualifications are grouped into:

- No qualifications
- Below level 2 (including 'other' qualifications)
- Level 2, five GCSEs at grades A*-C or equivalent
- Level 3, three A levels or equivalent (including trade apprenticeships)
- Level 4+, higher education

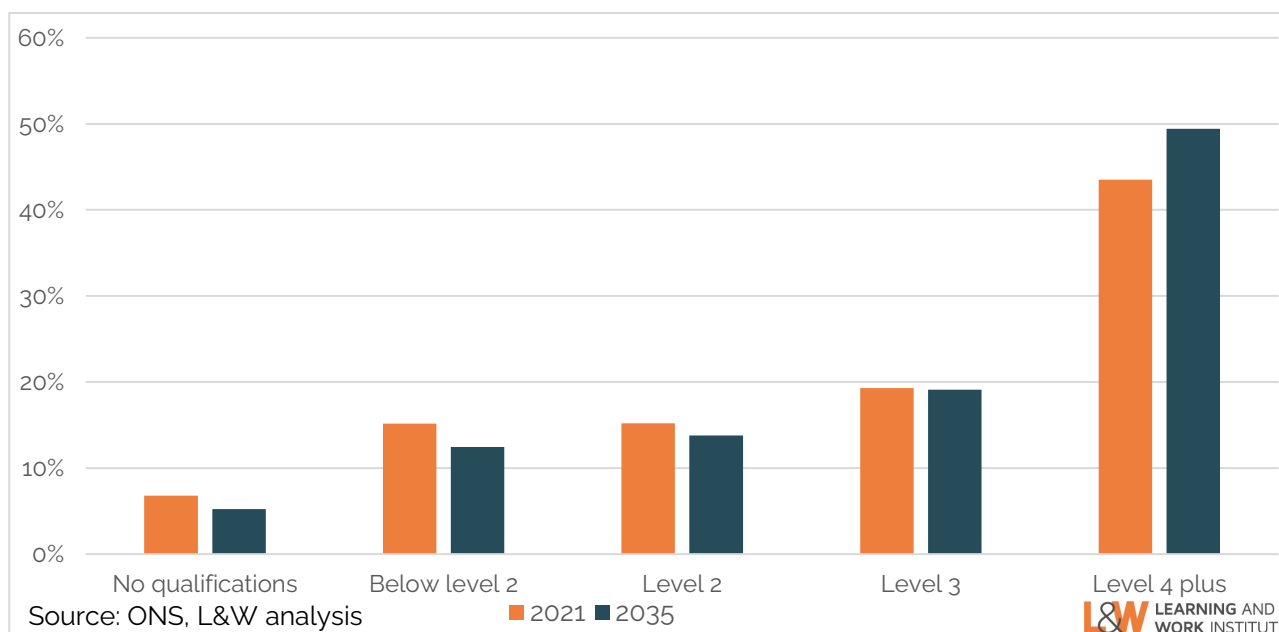
It sets a floor of 5% of people having no qualifications and a ceiling of 65% of people having higher education qualifications. These are intended to be reasonable benchmarks to prevent extreme results (e.g. that fewer than zero people might have no qualifications).

The results suggest that by 2035 almost one in two 16–64-year-olds will have at least a higher education qualification (49% v 44% in 2021), the product of the longstanding expansion of higher education over recent decades. The proportion of people with no qualifications would fall from 8% to 5%. However, the proportion of people qualified to level 2 (14% v 15% in 2021) and level 3 (19%, unchanged from 2021) would be little changed.

In other words, the UK would continue to see growth in the proportion of people with higher qualifications, falls in those with no qualifications, but no improvement in the proportion with intermediate qualifications. Almost one in three adults would be qualified at or below GCSE or equivalent level (31% v 37% in 2021); and more than one in six would not be qualified to GCSE or equivalent level (18% v 22%).

The UK continues to increase the proportion of people with higher education qualifications; but progress reducing the proportion of people with low qualifications and increasing the proportion with intermediate qualifications is slow.

Figure 1: Highest qualification of 16–64-year-olds in the UK, 2021 and 2035



Changes in the number (as opposed to proportion) of people qualified to each level are the product of: demographic change (generally better qualified young people entering the working age population, generally less qualified older people leaving it); population change (the combination of natural change and net migration leading to growth in the overall population and changes by age group); and adult upskilling.

In 2035, there will be 2.2 million 16–64-year-olds with no qualifications, 0.5 million lower than in 2021 with this change largely due to demographic change. The number of people qualified to higher education level (level 4+) will rise by 4 million to almost 22 million.

Figure 2: Projected change in number of people qualified at each level, 2021-35

	2021	2035	Change
No qualifications	2,789,300	2,241,419	-547,881
Below level 2	6,256,900	5,226,221	-1,030,679
Level 2	6,290,800	6,169,507	-121,293
Level 3	7,968,200	8,610,364	642,164
Level 4+	17,958,300	21,947,515	3,989,215

In addition, nine million adults in England have low literacy or numeracy, and around 13 million have low digital skills.¹

¹ Building skills for all: a review of England, OECD, 2016.

International comparisons in 2022

Comparing qualifications across countries can be challenging. However, the OECD groups qualifications by level, allowing a comparison of high (level 4+ in the UK), medium (levels 2 and 3 in the UK), and low (below level 2 in the UK) qualifications.

Note that this covers a different age range (25-64 rather than 16-64) and also a slightly different time period (starting at 2022 rather than 2021) to the UK analysis above and hence gives different results.

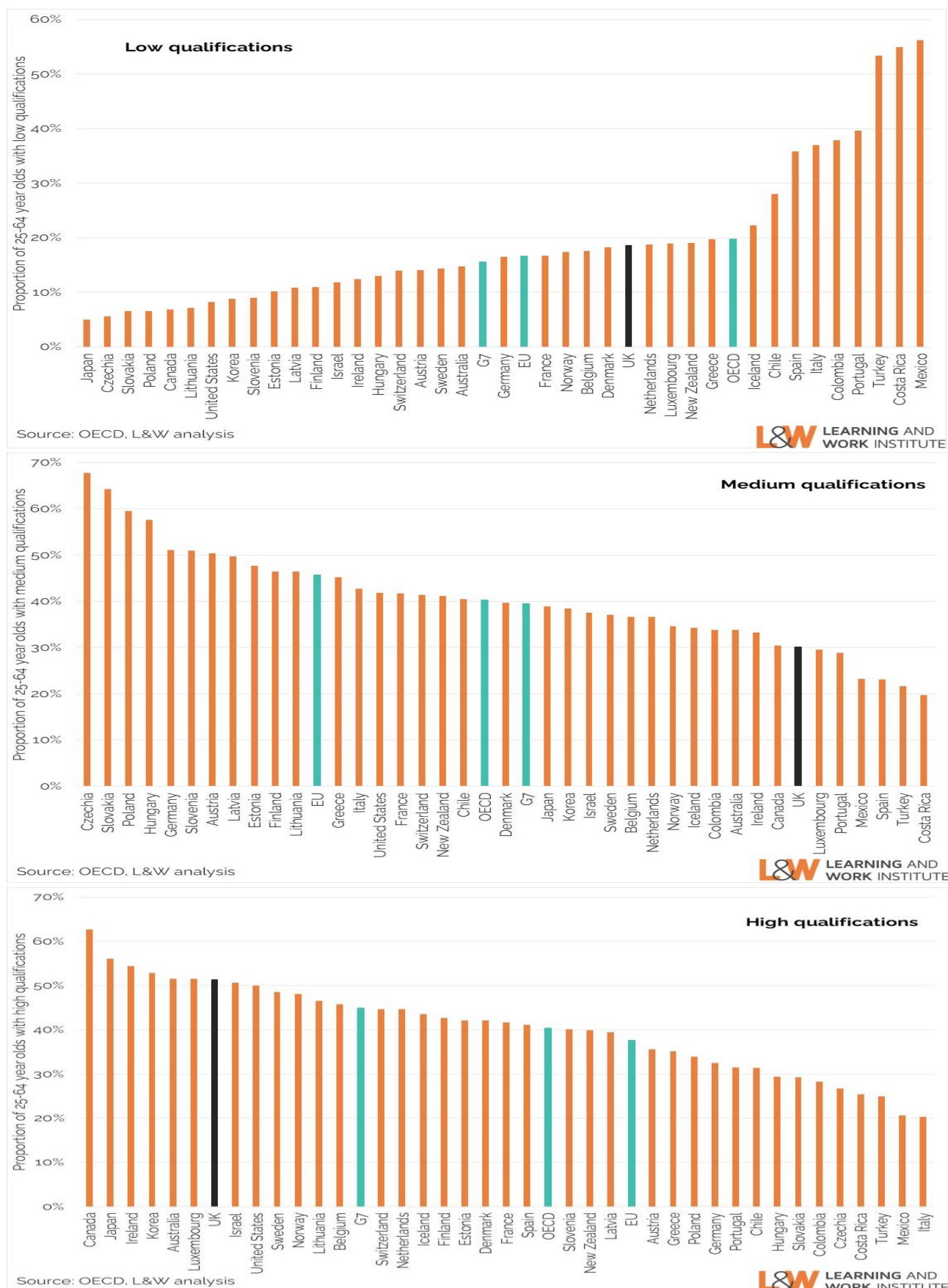
On this basis, in 2022 the UK ranked 6th out of 36 countries in the OECD for higher qualifications, 13th for low qualifications and 29th for medium qualifications. The particularly low ranking for medium qualifications partly results from the combination of a higher proportion of people with both high and low qualifications.

The UK has:

- a higher proportion (19%) of people with low qualifications than the EU (17%) and G7 (16%) averages, and about in line with the OECD (20%) average;
- lower proportion (30%) of people with medium qualifications than the EU (46%), G7 (40%) and OECD (40%) averages; and
- higher proportion (51%) of people with high qualifications than the EU (38%), G7 (45%) and OECD (40%) averages.

Improving the UK's ranking for medium qualifications without reducing its ranking for high qualifications would require more people gaining medium qualifications, thus reducing the proportion with low qualifications. Simply reducing the numbers gaining high qualifications would leave the UK still with a relatively high proportion of people with low qualifications.

Figure 3: Proportion of 25–64-year-olds with different qualification levels, 2022



Projecting international comparators to 2035

We have projected OECD country qualification profiles to 2035 using trends seen from 2011-21 and applying the same floors and ceilings as for the UK projections.²

These suggest there would be no improvement in the UK's relative position: it would rise from 13th to 12th for low qualifications, remain 29th for medium qualifications, and fall from 6th to 10th for high qualifications.

By 2035, the UK would have:

- a slightly higher proportion (13%) of people with low qualifications than the EU (12%), G7 (11%) and OECD (12%) averages;
- lower proportion (28%) of people with medium qualifications than the EU (38%), G7 (37%) and OECD (35%) averages; and
- higher proportion (60%) of people with high qualifications than the EU (50%), G7 (53%) and OECD (50%) averages.

The UK's qualifications profile is projected to improve by 2035, but other countries are improving at least as fast and often from a higher base. We are running to stand still.

To put this into context, the UK is projected to have 2.5 times as high a proportion of people with low qualifications than countries including Ireland and France. It would remain behind countries including Australia, Canada, Czech Republic, Estonia, Greece, Hungary, Ireland, Latvia, Lithuania, Poland, Slovakia, Slovenia and South Korea.

The proportion of people with medium qualifications is set to be 50% lower than in France, Italy and Germany (though in part this reflects differences in the proportion of people qualified to high level as well as differences in the proportions with low qualifications).

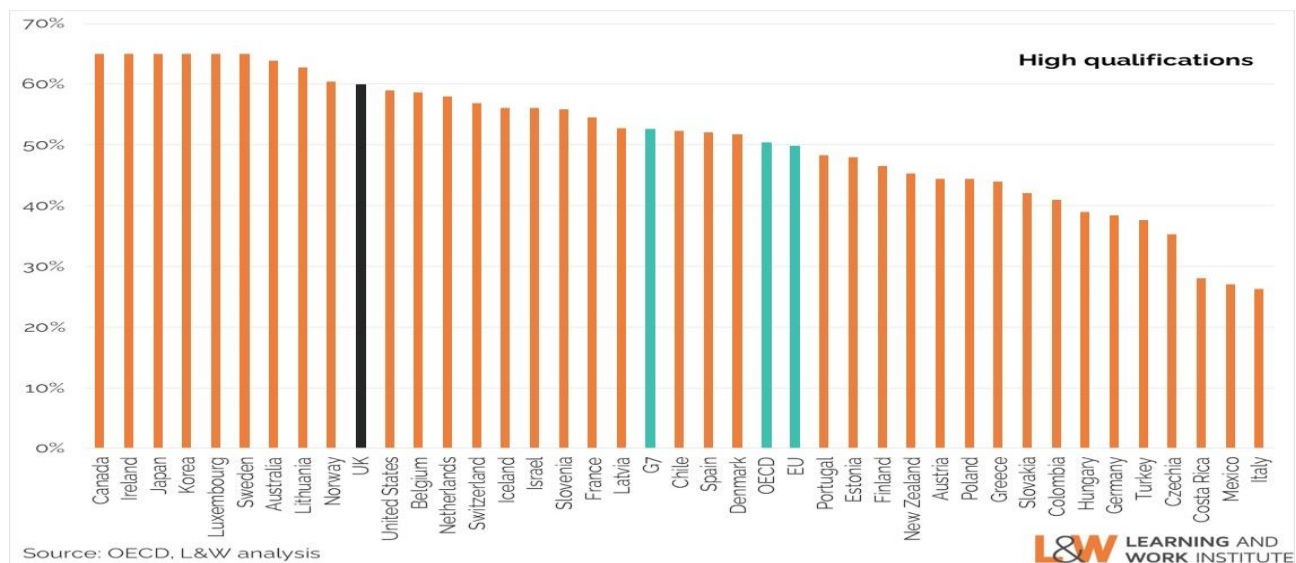
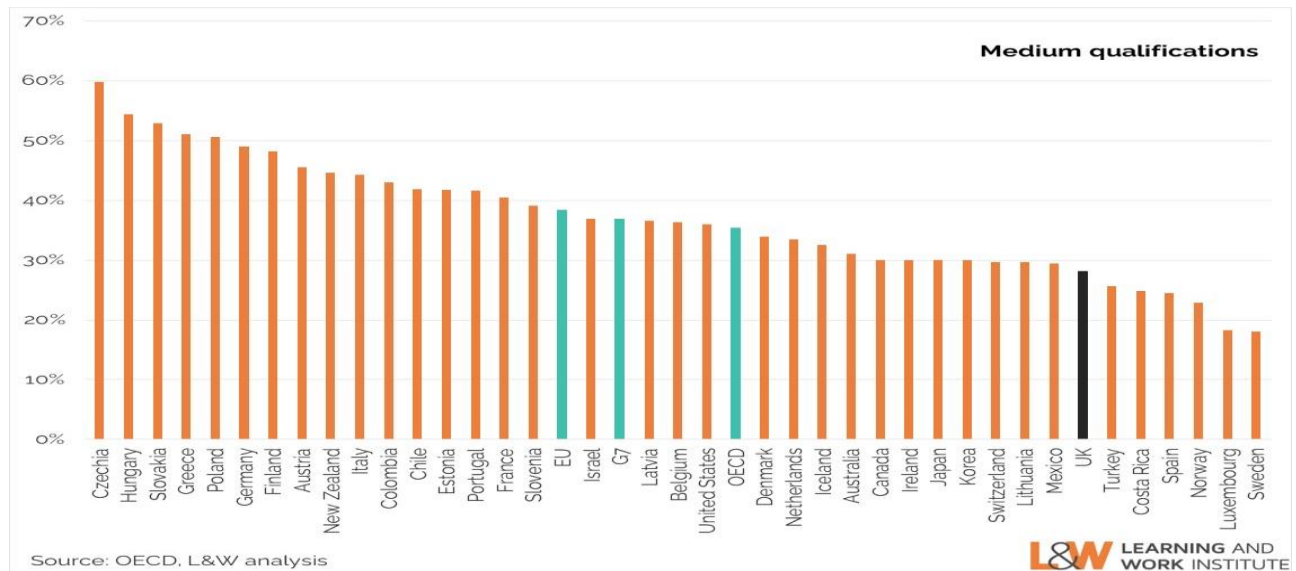
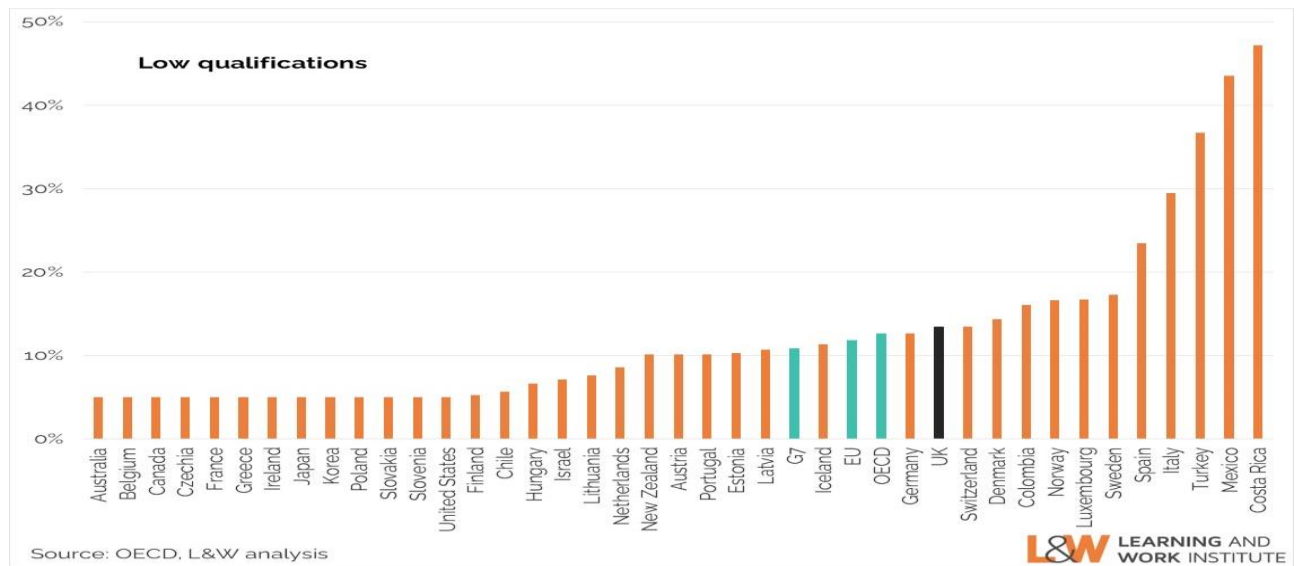
The proportion with higher qualifications would be relatively high, but behind Canada, Ireland, Japan, South Korea, Sweden, Australia, Lithuania and Norway.

Of course, the proportion of people with different qualification levels is only one measure. The quality of the learning that underpins those qualifications, use of skills in the workplace or in life, and learning outside of qualifications all matter too. In addition, skills can be different from qualifications – for example, 9 million people, across qualification levels, have low literacy or numeracy in England.³ These are explored later in this report and in future reports too.

² With some adjustments for specific countries: Germany where recent demographic changes have increased the proportion of people with no qualifications, risking skewing the trend (we have instead applied pre-2013 trends to the latest data); and Japan where disaggregated data for those with low qualifications is not provided so we have assumed it is at the floor of 5%.

³ Building skills for all: a review of England, OECD, 2016.

Figure 4: Proportion of 25–64-year-olds with different qualification levels, 2035



Looking at the proportion of people with low and high qualifications, the charts below show the UK is just in the upper quartile of the OECD for high qualifications but has a much higher proportion of people with no qualifications than comparator countries, the OECD top quartile, and other countries with similar proportions of people with high qualifications. Our projections show this is unlikely to change by 2035. Where the UK stands out particularly is having a high proportion of people with no qualifications.

Figure 5: Proportion of people with high and low qualifications, 2022

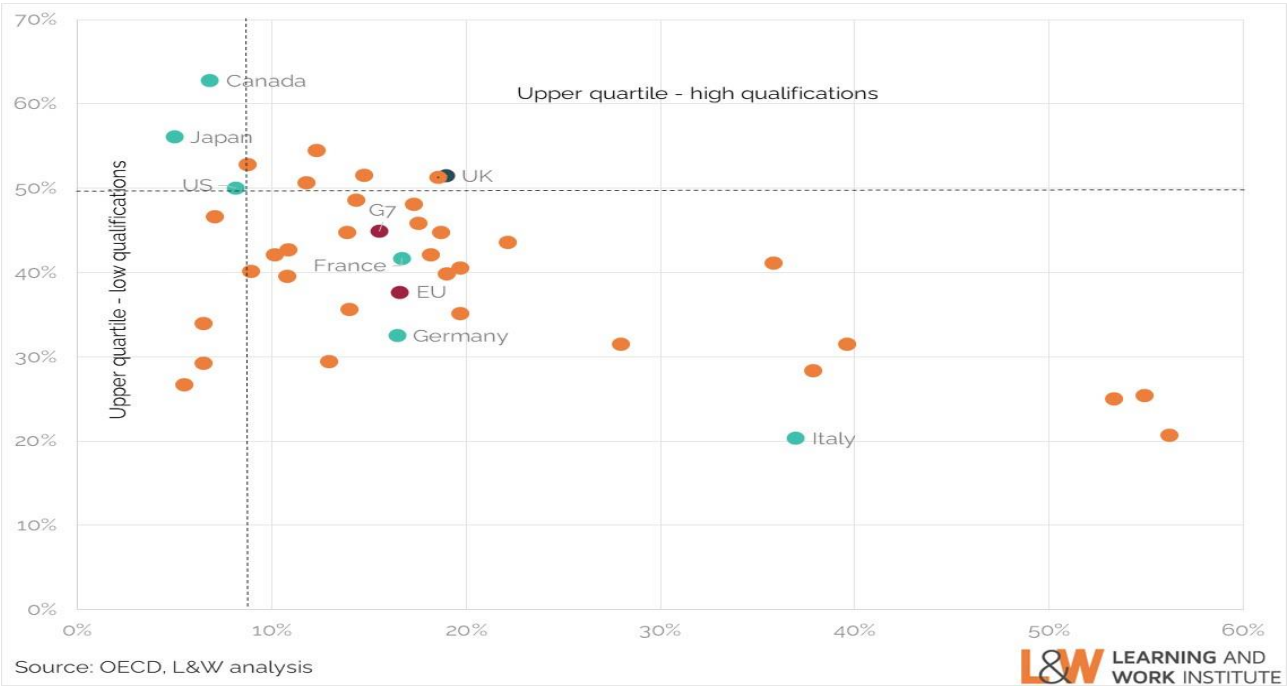
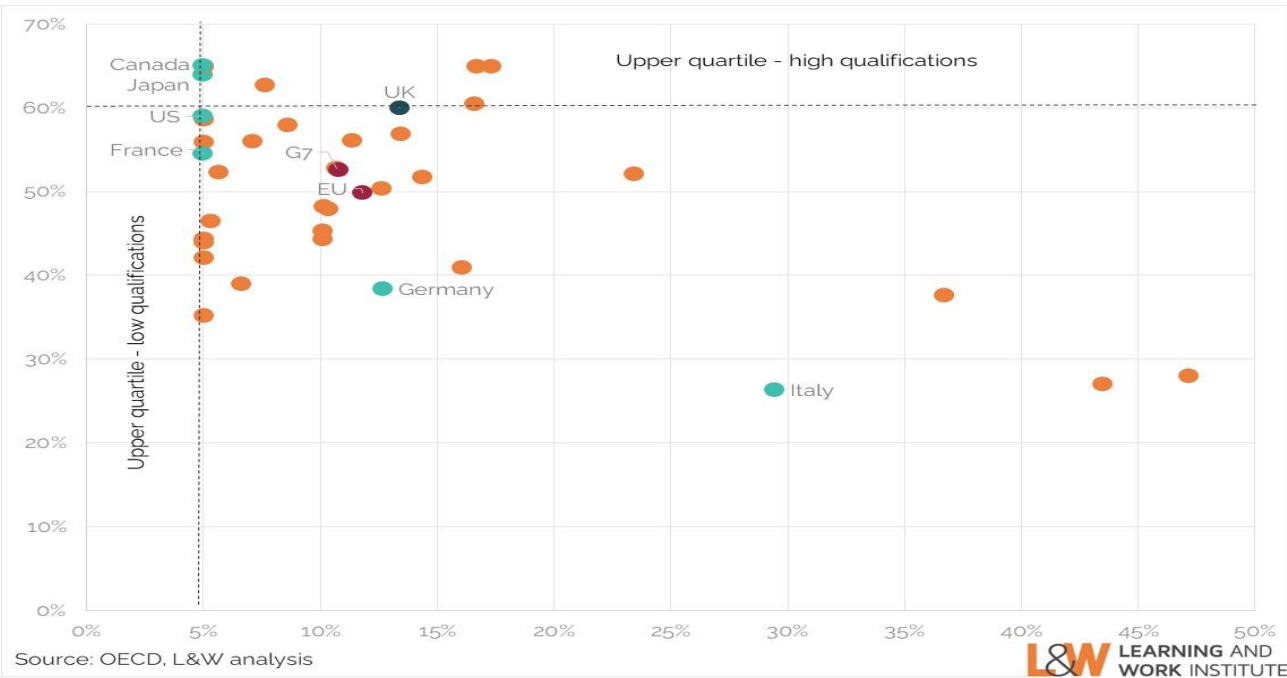


Figure 6: Proportion of people with high and low qualifications, 2035



Falling participation in learning

Seven million more qualifications would have been gained by adults in England in the last decade if 2010/11 patterns had continued. The sharpest falls were in English and maths, level 2, and in deprived areas. There are 27% fewer learners in the most deprived areas than 2015/16 but about the same in the least deprived areas. These lost learners represent lost opportunities for people, employers and the economy.

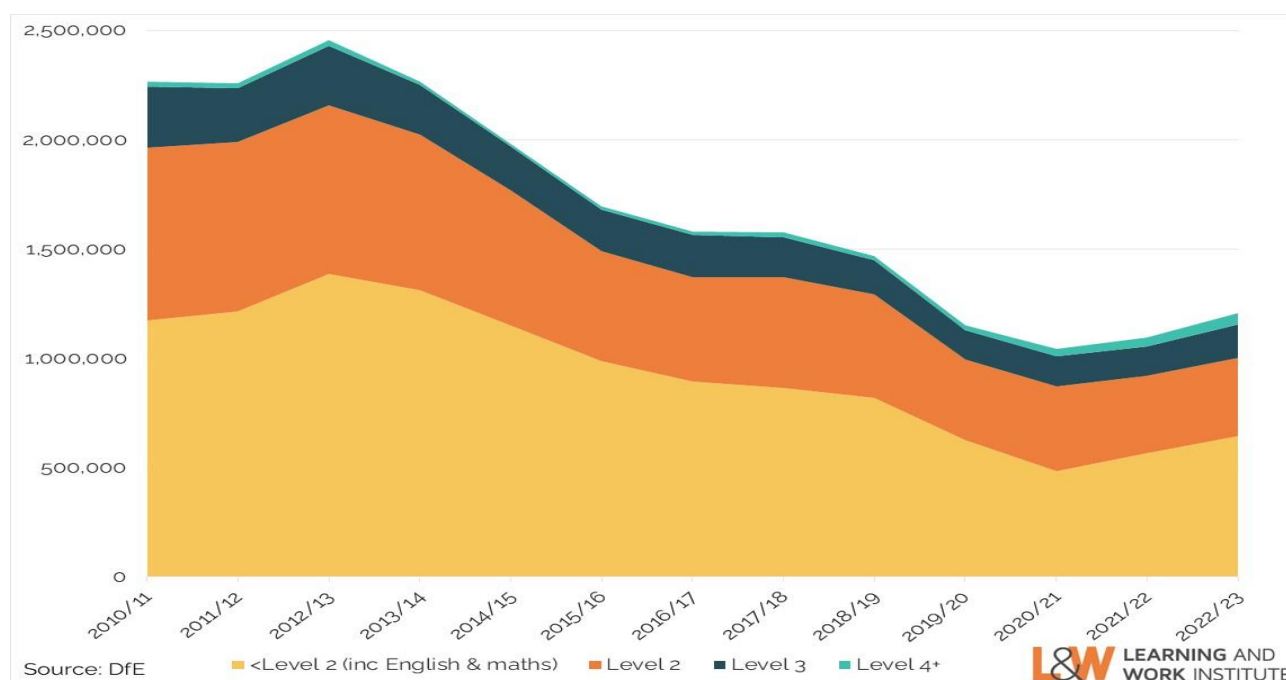
Improvements in the qualifications of the working-age population are a product of the (on average) better qualification profile of young people entering the workforce compared to older people leaving the workforce, as well as qualifications gained by people while in the workforce.

Learning and Work Institute's Youth Commission showed that the qualifications of young people have generally improved over time, but that progress in the proportion of people gaining level 2 and level 3 qualifications by age 16 and 19 respectively has stalled in the last decade (with a subsequent rise in the pandemic as qualifications were awarded on a different basis in the absence of exams, but the distribution of grades is planned to return to pre-pandemic levels in the coming years).⁴

Falling participation in adult learning in England

The number of adults improving their qualifications through further and adult education has almost halved since 2010/11; down from 2.26 million to 1.20 million.

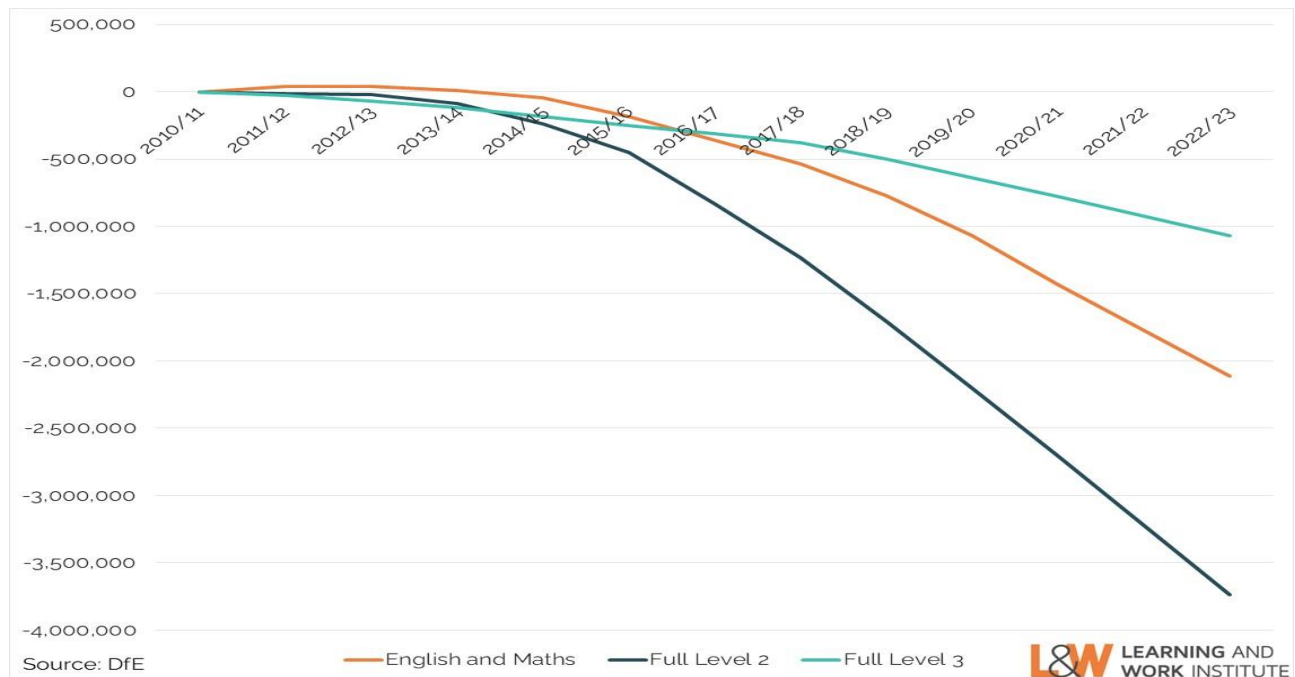
Figure 7: Qualification attainment by adults in England by level



⁴ Unleashing talent: levelling up opportunity for young people – Youth Commission final report, L&W, 2020.

The result is that adults have gained almost seven million fewer qualifications over the last decade than if attainment had stayed at 2010-11 levels.⁵ Of these, there are 2.1 million missing English and maths learners; 3.7 million missing level 2 learners; and 1.1 million missing level 3 learners.

Figure 8: Cumulative change in qualification attainment by adults in England by level since 2010-11



To put this into context, nine million adults in England have low literacy or numeracy so the missing learners represent 23% of the total need. Some of these learners may already have the English and maths skills they need, but not the accreditation. So not all will represent a genuine improvement in skills (even though accreditation of skills can have its own benefits). Plus some adults may undertake multiple English and maths qualifications, so the total may not represent 2.1 million people (rather, 2.1 million qualifications attained).

But even if 30% of these 2.1 million missing English and maths learners represent 'deadweight', and if adults take on average two courses each, this still represents 2% of working-age adults in England (and 25% of all adults currently have low literacy or numeracy). So the number of adults with low literacy or numeracy could have been 10% smaller than it is.

There are 7.6 million people aged 16-64 in England qualified below level 2, so the 3.7 million represent 48% of this maximum 'need'; the 1.1 million missing level 3 learners are 8% of the 13 million people are qualified at or below level 2.

⁵ Figure based on gaining 'full' qualifications, whereas Figure 4 shows attainment of any qualification at a particular level (e.g. one GCSE but not five GCSEs at A*-C) so the numbers would be even higher if calculated on that basis.

Again, these represent upper limits of potential lost improvements to the UK's qualification profile. Some of the missing learners may already have been qualified at the level they would have learned at (though the learning could still have benefited them). Or they may have had skills at that level but not the accreditation (though, again, the accreditation could have been of benefit, for example in terms of finding a job or progressing at work).

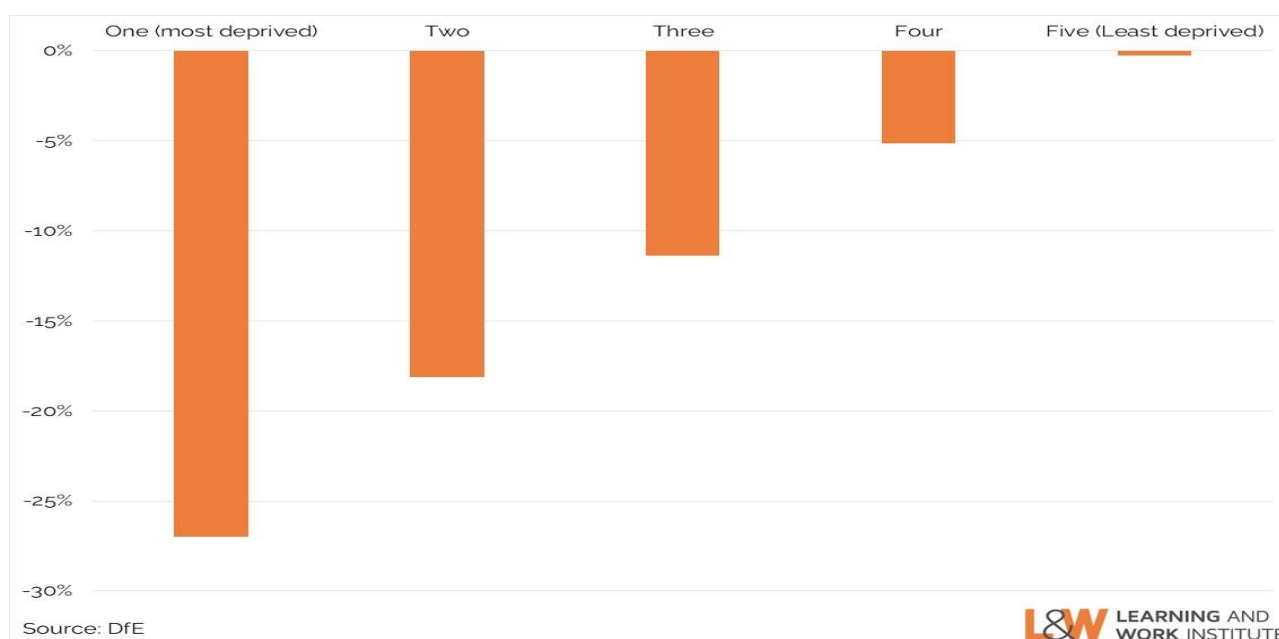
Some would also argue that there have been improvements in the quality of provision, for example because of the Government's reforms to apprenticeships in England. It is true that learning will only be of benefit if it is of high quality. It is also true that where learning is for work it will only benefit people and employers where skills are then utilised at work.

However, it is also true that the falls in learning participation have been dramatic. Given the UK's relative weakness (particularly in low and medium qualifications) compared to other countries, it needs a high quality *and* quantity of learning through a partnership of people, employers and national and local government to catch up.

The largest falls in participation in adult learning since 2015/16 in England (the earliest comparable data available) have been in more deprived areas. The most deprived areas have seen a 27% fall in the number of learners since 2015/16, whereas there has barely been a change in the least deprived areas. This is partly because adult skills programmes are more targeted to those with the lowest qualifications, so cuts will affect more deprived areas most. This will be exacerbated by greater policy focus on higher skills (see below).

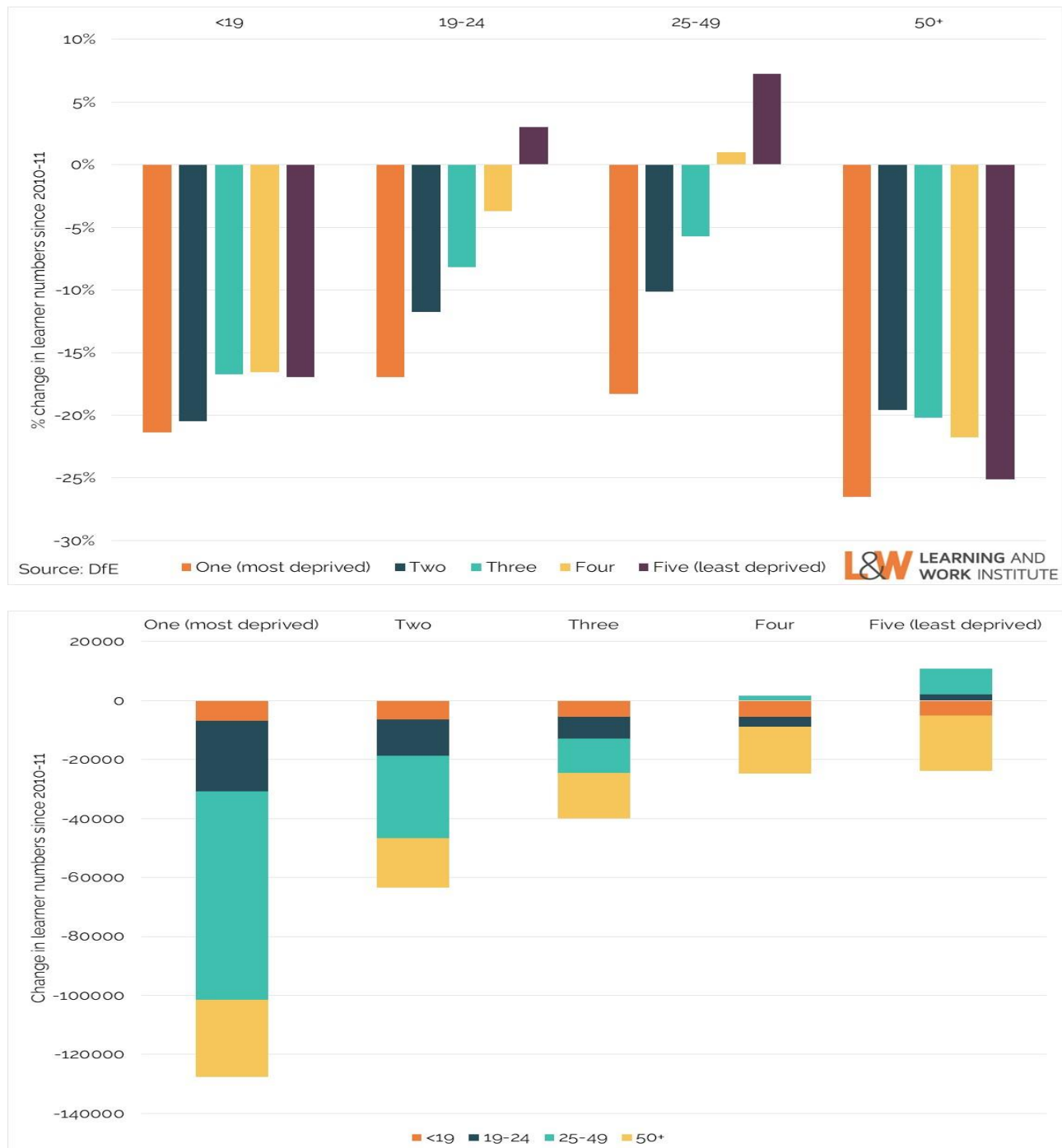
In 2015/16, people in the most deprived areas were 4.4 times as likely to participate in adult learning as those in the least deprived areas in 2015/16; this had fallen to 3.2 times as likely by 2022/23.

Figure 9: Percentage change in adult learners by area of deprivation 2015/16 to 2022/23



Younger and older learners that have seen the largest falls, both proportionately and in absolute terms. Only 25–49-year-olds in less deprived areas have seen rising learner numbers since 2010-11.

Figure 10: Proportionate and relative changes in learner numbers by age and area of deprivation

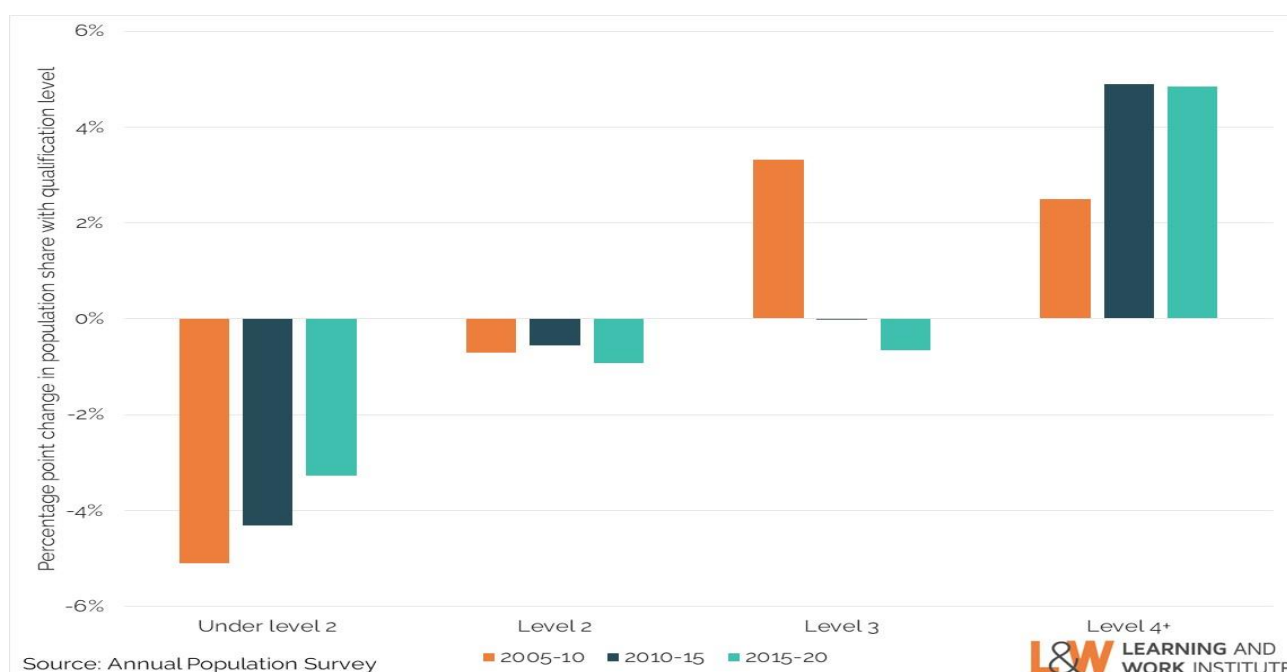


These lost learners represent lost opportunities given the many economic and social benefits of learning. They also represent a lost opportunity to improve the UK's qualification profile relative to other countries, important for the UK's future prosperity.

Slowing improvements in qualifications for adults

To estimate changes in qualification attainment by adults, we have looked at five-year periods: 2005-10; 2010-15; and 2015-20. For each we have calculated the qualification profile of 25–54-year-olds in the starting year and of 30–59-year-olds in the end year⁶. The percentage point difference between these profiles gives an estimate of the proportion of adults gaining a particular qualification level (though net migration and natural population change will have an impact too – this is an estimate rather than a longitudinal study looking at the same people over time).

Figure 11: Differences in the qualification profiles of 25–54-year-olds compared to 30–59-year-olds five years later in England



This method suggests that the rate of qualification improvements by adults has slowed since 2010: falls in the proportion qualified under level 2 have slowed; there is little change in the proportion qualified to level 2; and rises in the proportion qualified to level 3 have turned into small falls. The exception is an acceleration in people qualified at level 4+.

The picture this paints is of people continuing to acquire level 4+ qualifications, but a clear slowing in qualification attainment below this. Public funding cuts have not been offset by rising investment by people and employers (see next chapter). The result is the UK is on track to still have one third of people qualified at or below GCSE-equivalent level in 2035.

⁶ Published data is for 50–64-year-olds, so we have estimated the share of 50-54 and 50-59 year olds in that.

Falling investment in learning

The UK invests up to £104 billion (4.2% of GDP) of time and money in learning and skills for adults each year. However, while individual investment in learning appears to have held up relatively well, Government investment is down £1 billion (20%) in England since 2010 and employers are investing 26% less per person than they were in 2005. The focus of public investment in England has also shifted toward higher skills and away from entry level and essential skills despite these being a key shortfall compared to other countries.

The number of adults taking part in learning is the result of investment of time and money by individuals, employers and the Government.

This report estimates that up to £93 billion (3.8% of UK GDP) is invested in learning in England each year, with money accounting for £41 billion (1.7% of GDP) and the remainder people and employers time while learning.

Figure 12: Estimating investment in learning in England by Government, employers and individuals, 2022

	Money	Time	Total	Money as % GDP	Total as % GDP
Individuals	7,328	32,186	39,514	0.3%	1.6%
Employers	23,000	19,000	42,000	0.9%	1.7%
<i>Of which direct fees & costs</i>	7,900			0.3%	0.3%
Government: adult skills & tax relief	5,243		5,243	0.2%	0.2%
Government: higher education	9,818		9,818	0.4%	0.4%
Total	41,389	51,186	92,575	1.7%	3.8%

Assuming people, employers and governments invest at the same rate across the rest of the UK as in England would give UK figures of around £104 billion (4.2% GDP), of which £46 billion (1.9% GDP) is money and the remainder is investment in time.

The balance of responsibilities of course varies by level and type of learning. For example, fees for essential skills like literacy, numeracy and digital are funded by the Government whereas in England individuals pay for the bulk of higher education fees through income-

contingent loans. The rest of this section explores how each stakeholder's investment has changed over time.

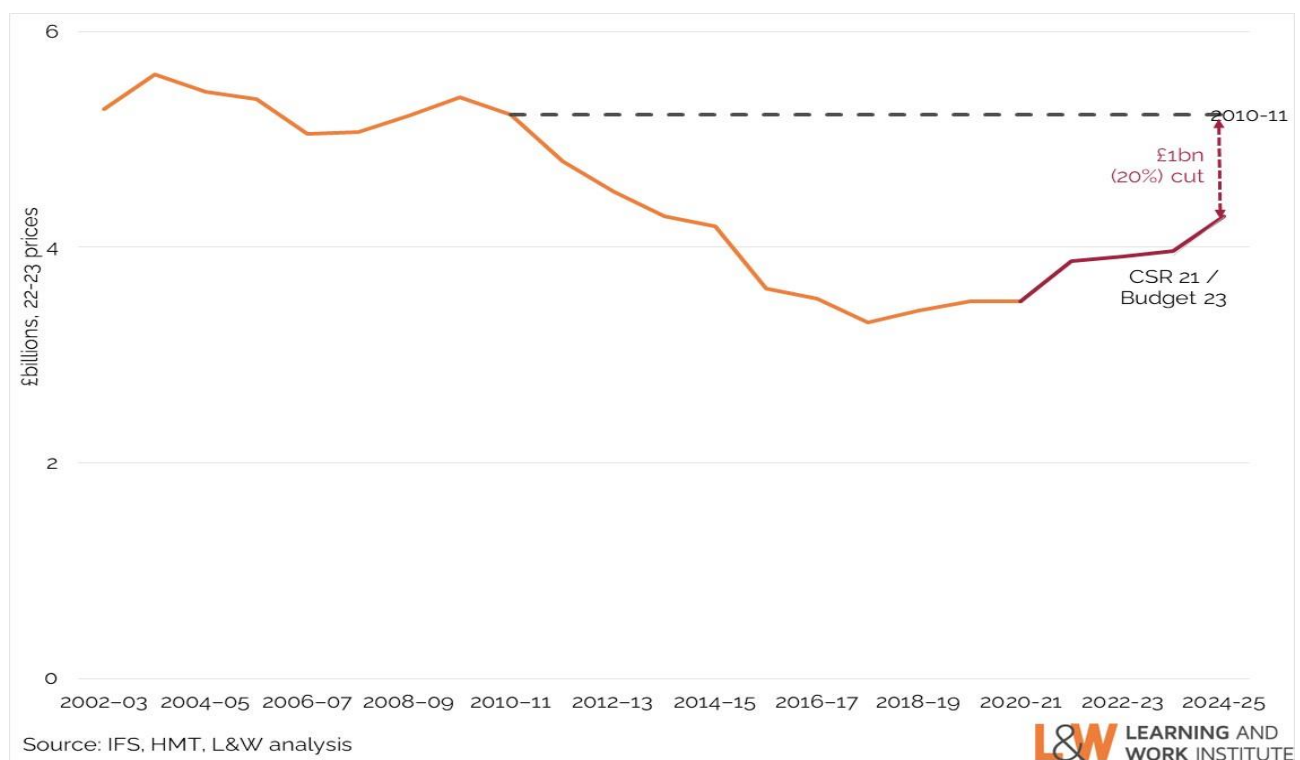
Individuals

Learning and Work Institute research suggests that people invest around £7.3 billion of money and £55 billion of time in learning (broadly defined) each year, and indicate this is unlikely to have fallen across the last decade.⁷

The Government

Although budgets are now increasing, Government spending on adult skills (excluding most forms of higher education) will still be £1 billion (20%) lower in 2025 than in 2010.

Figure 13: Government investment in adult skills in England



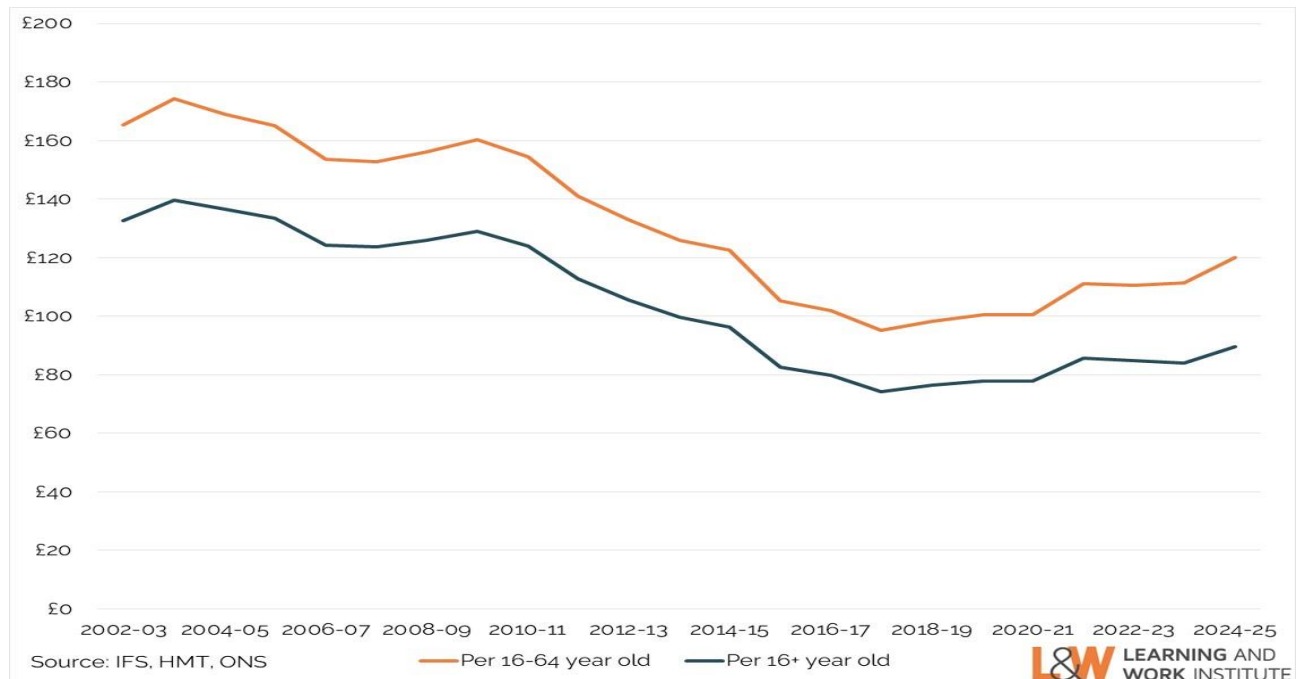
The population has grown over time too, so this reduced government investment is stretched across a larger population. The amount the Government spends on adult skills per 16–64-year-old has fallen 22% in real terms since 2010-11, from £154 each year to £120. The amount spent per person aged 16+ has fallen 28%, from £124 to £90, over the same time period. The drop is higher for the 16+ population because of higher growth in the number of people age 65+ than those aged 16-64.

Reversing this fall would mean an extra £1.6 billion per year. In other words, population growth means the Government's cuts to adult skills are larger in practical terms than the budget numbers alone would suggest. Restoring the budget to its 2010 levels would mean

⁷ Time to learn: increasing participation in learning, L&W, 2023.

a smaller proportion of the population being supported in learning than then, unless there have been significant productivity improvements reducing the unit cost of learning.

Figure 14: Per capita Government investment in adult skills in England



Excluding higher education, the Government spends 0.2% of GDP on adult skills. This is half the level spent on higher education and a tenth of the defence budget. International comparisons are challenging, but a 2013 study (which found results for the UK consistent with this report's analysis) suggested UK public investment in adult skills as a percentage of GDP was in line with the US, Austria and Germany, but behind countries like Denmark (0.4% GDP), Norway (0.6% GDP) and Sweden (0.5% GDP).⁸ This suggests UK Government investment in adult skills is relatively middle of the pack. The challenge is that we start, in places, from a lower base and also have lower employer investment in skills than many comparator countries.

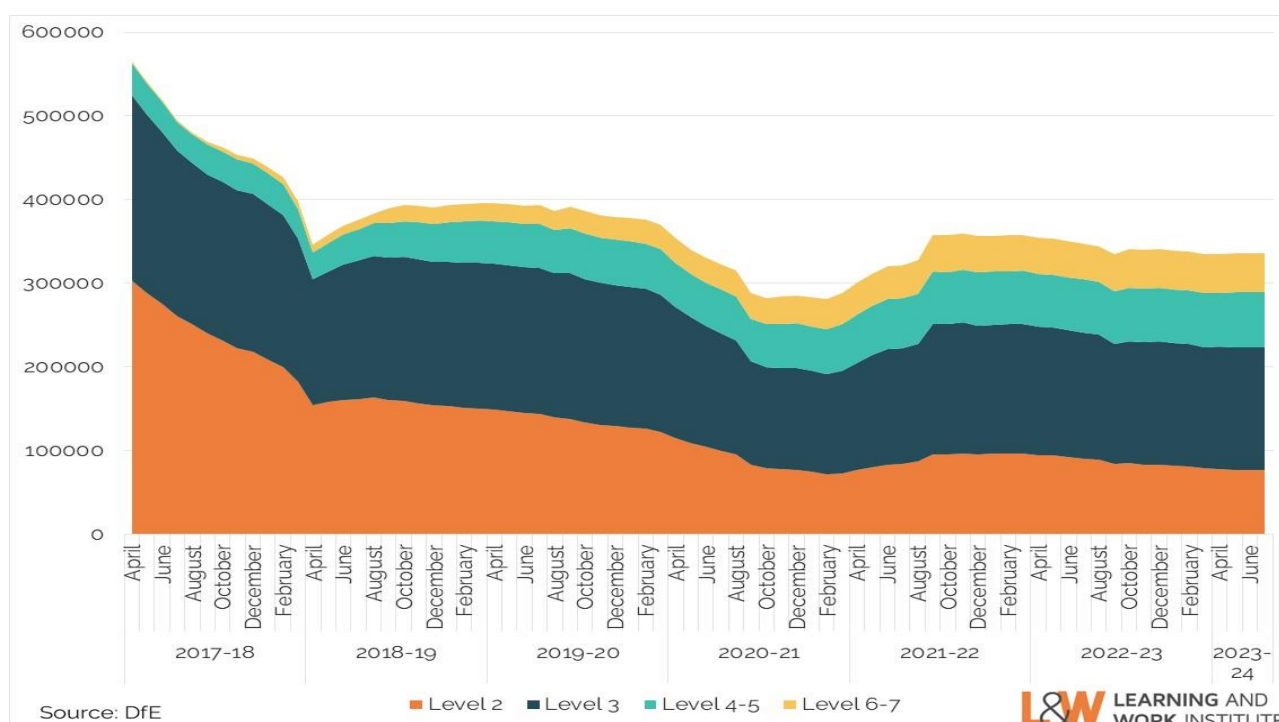
The focus of funding has changed too with a shift to apprenticeships and learning at higher levels, and away from other provision and learning at lower levels, including:

- ending the dedicated budget for and focus on literacy and numeracy through the Skills for Life campaign of the 2000s. The number of adults improving their English and maths has fallen 63% since 2010;
- introduction of higher apprenticeships with little incentive for employers to invest in apprenticeships at lower levels or for career starters or changers. The number of apprenticeships at level 2 more than halved between April 2016 and April 2022; the numbers at level 4 and above more than doubled;

⁸ Developing the adult learning sector: financing the adult learning sector, European Commission, 2013.

- reintroducing an entitlement to free tuition at level 3 (after the Coalition Government introduced income-contingent loans) but not at level 2 (though rules vary across England with entitlements based on differing levels of income). The fall in learning at level 2 (90%) has been much greater than the fall at level 3 (60%); and
- introducing new programmes like Skills Bootcamps, where two thirds of participants hold at least an A level equivalent qualification, one half had at least a degree-level qualification, and one half were already in work.⁹ This means that cuts in provision have been felt more heavily on programmes focused on people with lower qualifications or out of work.

Figure 15: Apprenticeship starts in England by level, 12-month average



Higher apprenticeships cost more and last longer, so are accounting for an increasing proportion of the apprenticeship budget in England: up from 3% in 2016/17 to 22% in 2021/22.¹⁰

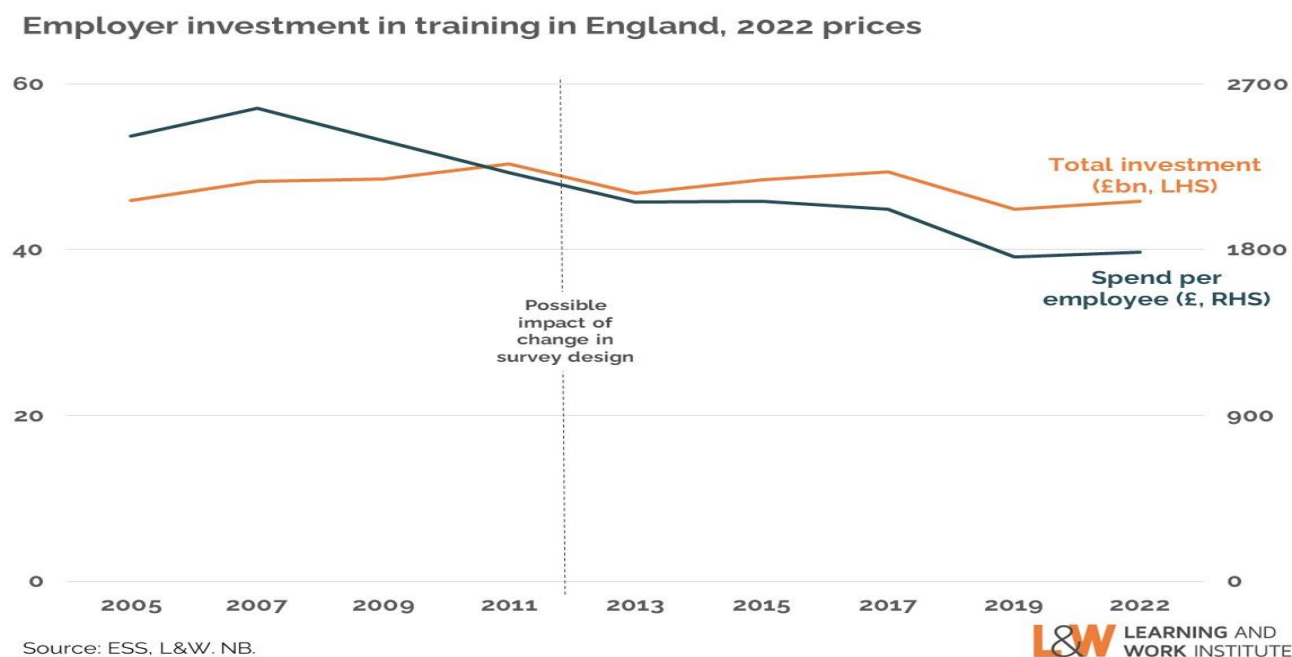
⁹ Evaluation of Skills Bootcamps: wave 2 implementation report, DfE, 2023.

¹⁰ [Level 2 apprenticeship spending down by £200m since the levy \(feweek.co.uk\)](https://www.feweek.co.uk/news/level-2-apprenticeship-spending-down-by-200m-since-the-levy)

Employers

Learning and Work Institute analysis has shown that employers are investing 26% less in training per employee than they were in 2005, and half the EU average, with falls in almost every sector.¹¹ Access to training is also unequal: people with graduate-level qualifications are three times as likely to get training at work than anyone else.

Figure 16: Employer investment in training



Why is this? Employer demand for skills is derived from their business strategies. So low economic growth and high political uncertainty is likely to have limited investment in both capital and people: if employers cannot see the returns from investment due to limited growth opportunities, or are uncertain about the future, then they are less likely to invest. Low and falling investment in skills is therefore in part related to the causes of low investment in capital (which has been a decades-long challenge for the UK) as well as by the causes of low economic growth over the last 15 years.

Cuts to public investment in learning are also likely to have had a knock-on impact on employer investment, and the tax system does not effectively incentivise investment in skills, particularly for those with low or no qualifications.

The combination of falling employer and Government investment in learning and skills means fewer opportunities for learning, particularly for those who have the lowest qualifications. This contributes to the picture shown in the previous chapter: the UK comparing not badly to other countries in the proportion of people with high qualifications, but not well on the proportion with low or medium qualifications.

¹¹ Raising the bar: increasing employer investment in training, L&W, 2022.

Understanding the demand for skills

The skills level required across the economy are generally rising, with growth strongest in sectors like health and social care and six million more jobs likely to need higher education qualifications by 2035. Transferable skills like caring, communication and team working are in rising demand. The rising supply of skills is barely keeping pace with demand for skills.

When it comes to the labour market, the skills that employers need and how they use skills are both crucial. They help determine whether gaining particular skills or qualifications benefits people, employers and the economy. Of course, learning has many other economic and social benefits outside of work, but the focus of this chapter is on the labour market.

It is difficult to project future demand for skills. Firstly because the future is difficult to predict: few predicted the financial crisis or pandemic, plus skills demand is the product of multiple decisions by millions of employers each year. Secondly because skills are a derived demand: employers demand for skills results from their business strategies, regulatory requirements etc, and these in turn are subject to a wider set of influences (e.g. whether the economy is growing and creating new business opportunities, the international trading environment etc). Thirdly because the demand for and supply of skills work together with each other. People learn skills that they think are in demand for the jobs they want to do, and employers adjust how they structure their jobs to adapt to the skills available.

This combination of complexity, skills as a derived demand, and endogeneity between skills supply and demand means that the demand for skills is not a standalone concept: we cannot simply predict the skills employers want and then set about providing them. Instead we need to think about the current direction of travel, the sort of economy and society we want to build (in terms of growth, fairness and sustainability), and the skills systems, acquisition and utilisation that will take us there from where we are.

Projections of skills demand therefore give a sense of where current trends are taking us for us to then think about whether that is where we want to be. They can also give people and employers an important insight to inform their decision making. But they are not firm predictions of what the future will hold. Plus of course, skills will be of most benefit to people and employers when they are fully utilised at work: so we need to see skills supply, demand and utilisation together.

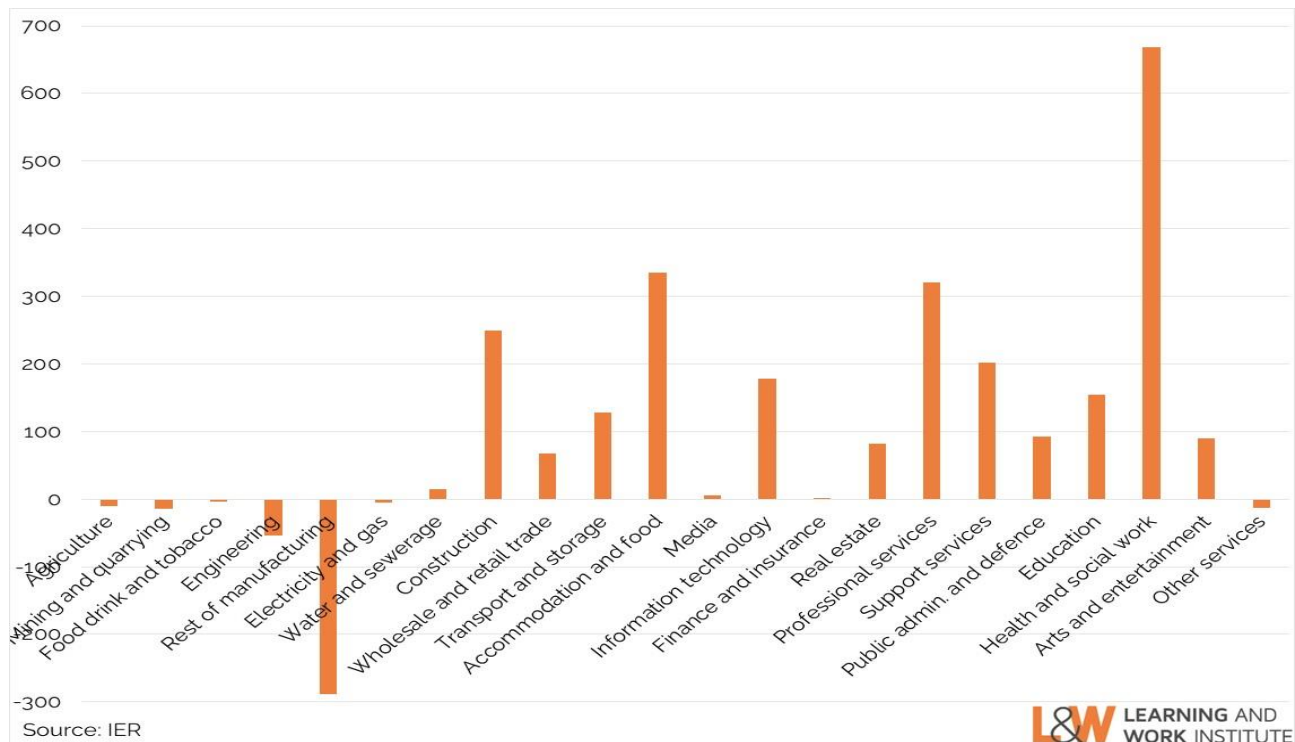
Working Futures sector, occupation and skills projections

One of the most widely used labour market and skills projections is Working Futures, which projects ahead to 2035.

These projections suggest the biggest growth in employment levels between 2019 and 2035 will be: health and social work (669,000); accommodation and food (335,000);

professional services (321,000); and support services (202,000). These reflect the impacts of an aging society, consumer economy (e.g. the importance of tourism and hospitality), and the UK's comparative strengths in sectors such as professional services.

Figure 17: Projected change in employment levels by sector, 2019-35



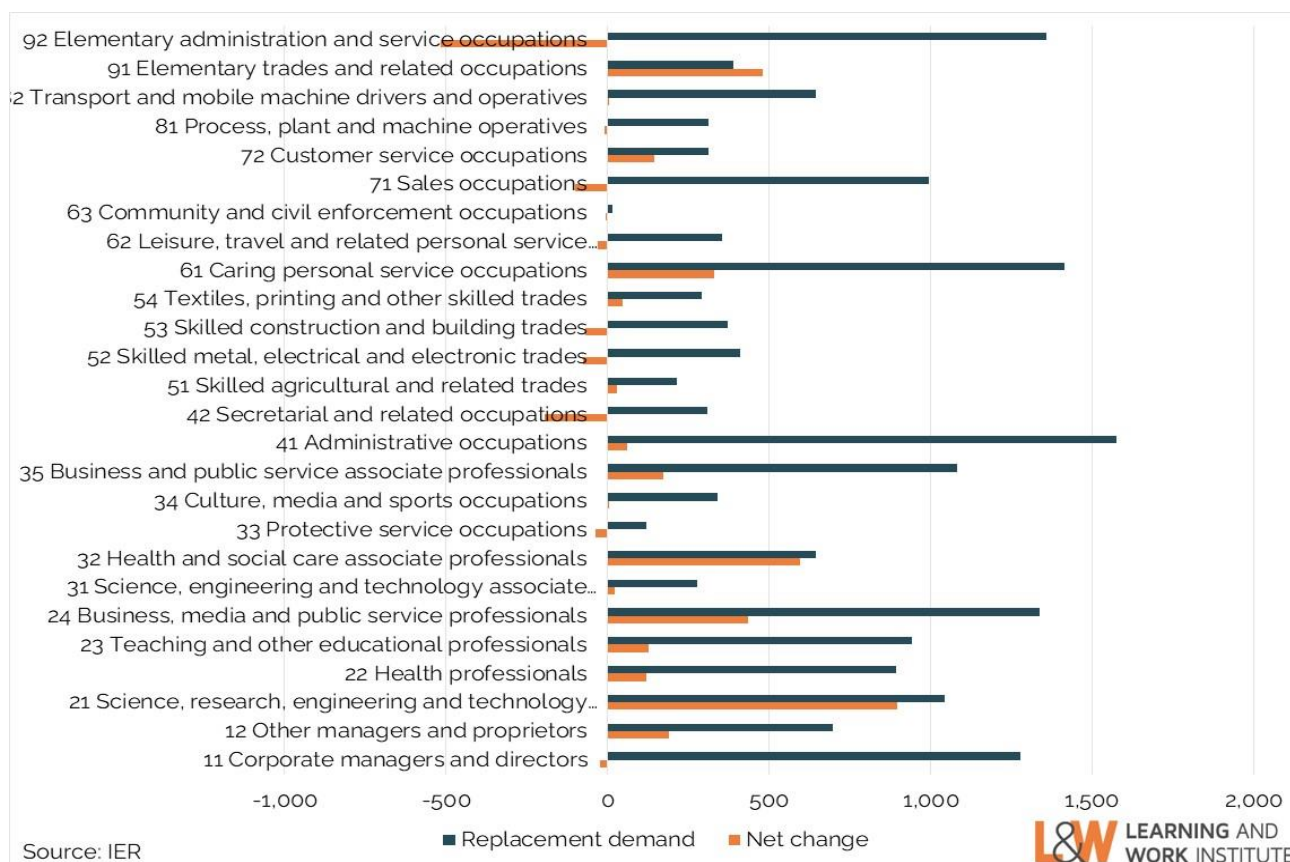
Translating that sector picture into occupations, Working Futures separates out net change (overall growth or shrinkage in a particular occupation) and replacement demand (people retiring or leaving an occupation and needing to be replaced).

In most cases, replacement demand significantly outweighs net changes. That is, regardless of structural change in the economy, natural turnover means there are likely to be significant numbers of job openings in most occupations. So skills demand isn't just about which occupations are growing or shrinking, it's also about filling vacancies across the economy as they arise from people switching jobs or leaving the labour market.

The biggest demand is likely to be: science, research, engineering and technology professionals (1.9 million); business, media and public service professionals (1.8 million); caring personal service occupation (1.7 million); administrative occupations (1.6 million); and health and social care associate professionals (1.2 million).

Many of these are driven by either the UK's aging population (resulting, for example, in rising demand for health and social care) or sectors of strong comparative advantage that will drive future growth (e.g. life sciences, business services, and creative industries).

Figure 18: Net change and replacement demand by occupation, UK, 2020-35



Growth is also concentrated more in higher and professional occupations, which is likely to mean an increased demand for higher level skills (assuming the same trends in qualification level by occupation seen today). Indeed these projections suggests by 2035 there will be 3.5 million fewer jobs filled by people with qualifications below A level or equivalent and rise of 6 million above this qualification level.¹²

Crudely comparing the projections for qualification supply and demand would mean by 2035:

- **Below level 2.** 18% of people qualified to this level and 8% of jobs projected to be filled by people qualified to this level;
- **Level 2.** 14% of people qualified to this level and 13% of jobs projected to be filled by people qualified to this level;
- **Level 3.** 19% of people qualified to this level and 19% of jobs projected to be filled by people qualified to this level; and
- **Level 4+.** 49% of people qualified to this level and 61% of jobs projected to be filled by people qualified to this level.

¹² Projected population growth explains why these two figures do not sum to zero.

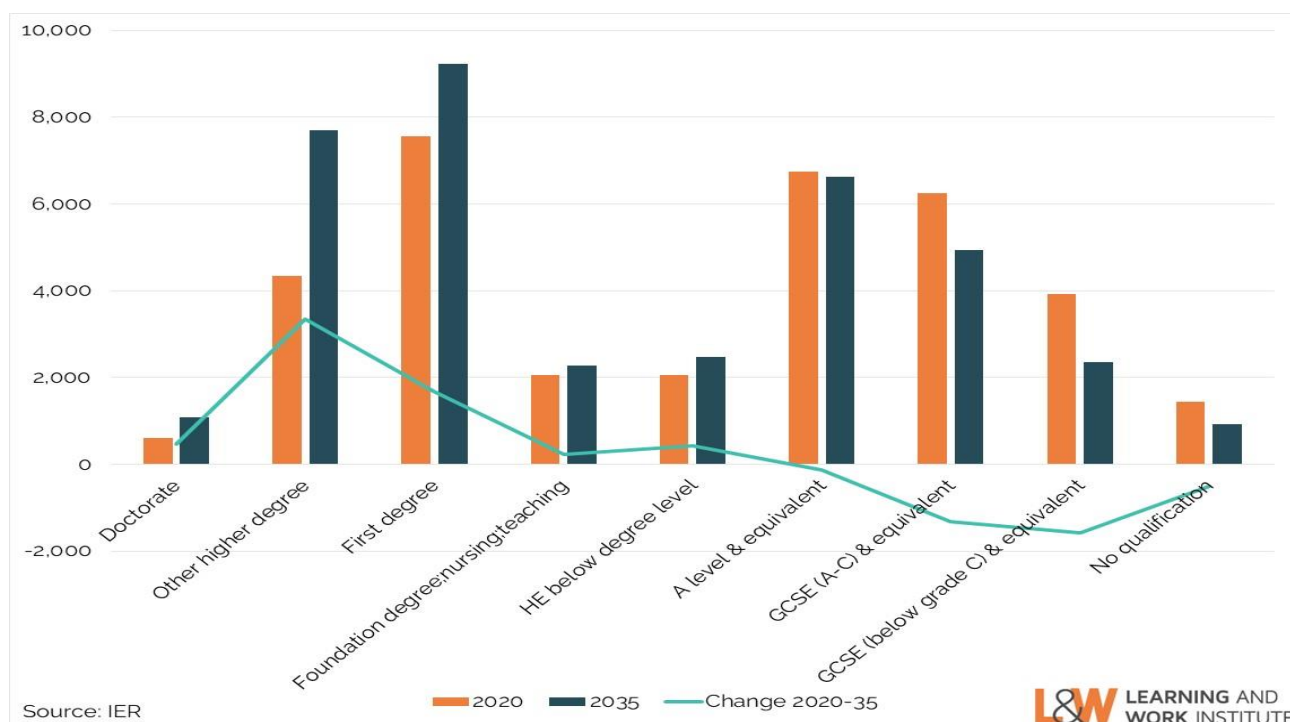
On the face of it, this suggests a projected oversupply of around 4 million people with below level 2 qualifications by 2035 compared to employer demand, and undersupply of 5 million people with level 4 or above qualifications.

Of course in practice this imbalance wouldn't occur: employers will adjust the jobs they offer and the choices they make depending on the skills and people available. Instead this mismatch illustrates what would happen if qualification supply and demand continue (independently of each other) in line with recent trends. And this could hold back productivity.

If the UK doesn't increase its skills base, therefore, the result won't be seen simply in a shortage of skilled workers but more in opportunities lost, paths never taken and growth foregone.

This is part of a longer run shift to demand for higher skills and qualifications linked to technological change, globalisation and the UK's relative strengths. While the precise scale and speed of change may vary, the direction of travel is clear: the UK is increasingly a level 3 (A level or equivalent) or above economy.

Figure 19: Qualification demand, 2020-35



Demand by type of skill

Changes in the sector and occupational structure of the economy, as well as changes in technology and the global economy, are and will change the *type* of skills needed for work.

The Skills Imperative 2035 programme, funded by the Nuffield Foundation, has found that, while specialist skills and knowledge are important in most occupations, transferable

essential employment skills will be most in demand by 2035.¹³ These include: communication; collaboration; problem-solving; organising, planning and prioritising work; creative thinking; and information literacy.

Nesta has also developed a skills taxonomy, which maps groups of skills by job and occupation to look at which are in most demand and where the overlaps in types of skills demand between sector and occupation are. This suggests that the most in-demand skills currently are: social work and caregiving; general sales; software development; office administration; driving and automotive maintenance; business management; accounting and financial management; business analysis and IT projects; accounting administration; and retail.¹⁴ The taxonomy also maps whether high demand for particular skills maps across to higher salaries, and how demand for skills is changing.

Summary

Taken together, the UK continues to transition to rising demand for higher skills both through structural change and through rising and changing demand for skills within sectors and occupations. The bar to get into a job and on at work is rising.

Comparing this to the qualification supply projections in earlier chapters suggests the projected growth in the number of people with level 4+ qualifications is the least we need to match our changing economy (though of course there are debates about how people should acquire these skills and whether they are fully utilised in the workplace). Similarly, the projected path of employer demand suggests progress in reducing the number of people with low qualifications is, if anything, too slow. And of course these projections assume, to an extent, a continuation of 'business as usual' rather than building a path to a higher growth future or changing the path that we're on to reflect a more rapid push to net zero than the market alone would give us.

In this sense, the UK is running to stand still: both to keep pace with other countries and to keep up with rising employer demand for skills.

That said, there will be demand for skills and job openings at all levels. So we shouldn't just focus on growth sectors or high skills: across our economy and society, people need to gain the skills to succeed.

¹³ An analysis of the demand for skills in the labour market in 2035, NFER, 2023.

¹⁴ Making sense of skills: a UK skills taxonomy, Nesta, 2022.

Conclusions

The good news is that the UK's qualification profile is projected to continue to improve. The bad news is that most other countries are improving at least as fast and many from a higher base. And that our changing economy demands higher skills too.

The result is that the UK is poised to remain mid-table in intermediate qualifications, with one in three adults likely to still be qualified at or below GCSE or equivalent level by 2035. Tackling this shortfall compared to other countries is also a prerequisite for aiding further progression to intermediate and higher qualifications.

A key reason is that both the Government and employers have cut their investment in learning. The Government has cut investment in learning for adults by £1 billion (20%) since 2010 and also refocused investment on higher skills, leaving those with low literacy or numeracy or lacking a level 2 qualification (in other words, the areas where the UK has the biggest shortfalls) at greater risk of missing out.

Meanwhile, employers have cut their training investment per person by 26% since 2005 and graduates are three times more likely to get training at work than non-graduates. Again, those with the lowest qualifications – where the UK has the biggest shortfalls compared to other countries – are at greater risk of missing out.

This matters because of the importance of learning and skills to people's lives, career opportunities, employers' success, and economic prosperity.

Projections suggest that technological change, an aging population and the changing global economy are all likely to affect future demand for skills. Health and social care, hospitality, and business services are all likely to grow further. And demand for higher qualifications is likely to grow further still.

Skills improvements are struggling to keep pace with this rising demand and to find ways to deliver the transferable employability skills, as well as specific technical skills, that employers increasingly want.

At the same time, for skills improvements to contribute to productivity growth requires a step change not just in employer's demand for skills but also in the utilisation of skills in the workplace.

On current trends, the UK risks falling short by 2035: not improving our international skills position when the skills of our people are a core economic asset; not meeting the needs of a changing economy; not fully utilising the skills we have; and not ensuring everyone has sufficient opportunities to learn for life and work.

Our Ambition Skills programme will explore how we can change this, setting and delivering a higher skills ambition for the UK.