



Training trends in Britain

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Contents

Foreword	3
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Executive summary	
The importance of training	4
The volume of training	4
The quality of training	5

1. Introduction	
Trends	7
Objectives	8

2. Recent trends in the volume of training	
Findings from the Quarterly Labour Force Survey	10
Findings from the Skills and Employment Survey	14
Findings from the UK Household Longitudinal Study	14
Findings from the Employer Skills Survey	19
Findings from the Continuing Vocational Training Survey	20
Summary of changes in training volume since the late 1990s	21
Possible explanations	22

3. Recent trends in the quality of training	
Measurement of 'training quality'	26
Findings from the Skills and Employment Survey	28
Findings from the UK Household Longitudinal Study	31
Findings from the Employer Skills Survey	32

4. Conclusions	35
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References	36
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Foreword

This new analysis of workplace training trends was commissioned by unionlearn to inform the current policy debate about skills and workforce development. This debate has acquired greater urgency due to growing concerns about the potential impacts of Brexit and automation on employment and wage prospects in the coming years. The study builds on earlier research showing that the volume of workplace training declined by about a half between the end of the 1990s and the beginning of the current decade. Professor Francis Green and Dr Golo Henseke have updated the earlier analysis and also looked at recent trends in the quality of workplace training.

What do the findings tell us? First and foremost, the decline in the volume of training has clearly not abated. Analysis of the two largest national employee surveys indicate that since 2011 the rate of decline has ranged from 10 per cent to 19 per cent. According to the largest employer dataset the decline has been of a lesser magnitude in this period, but still shows a fall of five per cent.

The research also looks at the amount of training experienced by specific groups within the labour market and this throws up some very worrying trends. Since 2011 the rate of decline in the amount of training received by those with lower-level qualifications (below GCSE/Level 2) was 20 per cent, double the rate of decline experienced by the workforce as a whole. Young workers, aged 16-34, also fared poorly and experienced a decline of 16 per cent in the volume of training going their way.

The researchers conclude that there is little evidence of any improvement in the quality of workplace training in recent years and that this reinforces the pessimistic picture of training trends. This is backed up by other findings, including that there has been a fall in the proportion of workplace training certified to nationally recognised qualifications (down from 22 per cent to 18 per cent). There has also been an increase in the incidence of shorter training durations (less than a week), accounting

for 56 per cent of all training in 2018 compared to 49 per cent in 2011 (and 34 per cent in 1996).

When it comes to the quality of apprenticeship training, the researchers identify a range of concerns from a number of sources, including the OECD and UK parliamentary committees. Some of the key themes identified include weak oversight and regulation of both the quality and duration of training in our apprenticeship system. The degree to which this is accounted for by the absence of a 'social partnership' governance model found in other countries with high-quality apprenticeship systems is also discussed.

On a more positive note, the study shows that the union 'mark-up' on training is holding up well, with training volumes averaging a 19 per cent higher level in unionised workplaces. A number of surveys have shown that unionlearn and the Union Learning Fund (ULF) continue to boost access to learning and skills, especially for those facing the greatest barriers to training. While opportunities to learn are in decline in almost all areas, the union learning route remains a key driver of participation in skills development.

In conclusion, I would concur with the central recommendation that government should examine recent workplace training trends closely and use the analysis to inform skills policy going forward. With nearly 90 per cent of the 2030 workforce already in the workplace and a number of pressing challenges facing the UK labour market, time is of the essence. We urgently need better and more effective policy levers to stop the decline in skills in the UK, including: a right to time off to learn; access to good-quality advice and guidance; and a learning account for all workers.



Kevin Rowan
Director, unionlearn

Executive summary

The importance of training

Training has been important for prosperity for a long time, but several factors heighten the need to broaden and deepen the skills of Britain's workforce for the coming two decades. Among the most telling are: the jobs and skills challenges posed by the spread of robotics and the use of artificial intelligence in all sectors of the economy; the longer and more variable careers that stem from an ageing population with later retirement; the persistent regional and socioeconomic disparities across Britain; and the growth of insecure forms of employment or self-employment.

In the context of a post-Brexit Britain, with probable declines in the extent to which employers will be able to draw on migrant labour from European Union (EU) countries, developing workforce skills has acquired an even greater urgency.

Meeting this need will depend on Britain's training system. Nearly nine out of ten of Britain's 2030 workforce, and still two-thirds of the 2040 workforce, are already in work today. An upskilling of the workforce cannot therefore rely just on improving the education system.

In today's debates, few seem to be aware of how much, or how little, job-related training takes place, and of the importance that training will have to play in increasing workforce skills for an uncertain future. To begin to see where Britain is heading, therefore, and how much may need to be done to support good-quality training in the workplace, this report presents a picture of how the quantity and quality of training have been trending in recent years, for those already in the workforce.

The volume of training

High-quality, regular, nationally representative surveys show that the average UK worker now spends between two and four days per year doing some form of job-related training.

Yet the amount has been declining in the last two decades. The volume of training for each worker declined by 44 per cent between 1997 and 2009. It was still falling rapidly – by about 6 per cent – between 2009 and 2011, the period immediately after the financial crisis. Despite some changes in the method of measuring the volume of training, new survey analysis shows that the earlier decline has persisted into the latter half of the current decade, though at an uneven pace.

The estimated extent of the recent fall varies between surveys because they cover different time periods and combinations of types of training; yet three surveys point in the same direction. According to the Quarterly Labour Force Survey (QLFS), the average time spent on job-related training over a four-week period was 2.1 hours in 2011 and 1.9 hours in 2018, a fall of 10 per cent. For the annual volume of formal training reported in the UK Household Longitudinal Study (UKHLS), the fall was by 19 per cent over 2011–17; for the employer-funded training reported in the Employer Skills Survey (ESS) the fall was by 5 per cent over 2011–17. Meanwhile, the Skills and Employment Survey (SES), with its less regular coverage, showed an 18 per cent decline in the number of days in which on-the-job instruction took place over 2012–17.

In corroborating evidence from the QLFS, the proportion of training courses that last less than a week has risen over the long term from 34 per cent in 1996 to 56 per cent in 2018. In further supporting evidence from the ESS, employers' real-terms expenditure on training per worker fell by about a fifth between 2006 and 2017.

The report also looks at how training volumes have changed for particular groups. High-, mid- and low-level education groups all experienced declines in training volume over the 2011 to 2018 period; however, the low education group – those with less than GCSE grades A* to C or no qualifications at all – always received the least training, and experienced proportionately the greatest training decline. According to the QLFS, training hours for the least well educated fell by approximately 20 per cent – that is, twice as fast as for the workforce as a whole.

According to the QLFS, women experienced 10 per cent more job-related training than men at the start of the 2011–18 period. Later in this period training volumes declined for both sexes, though somewhat more for men than for women, so that by 2018 men’s experience of training was even further behind: the gender difference had reached 14 per cent.

According to UKHLS data, over the whole period 2010–17, training volumes averaged 19 per cent higher at workplaces with union representation or a staff association than in non-unionised workplaces.

No evidence points decisively in favour of any one explanation for the declining volume of training, though a plausible one is reduced incentives for upskilling. Another is that upskilling might be being delivered, in some workplaces, through better work organisation that facilitates learning on the job, rather than through formal training; but there is no strong evidence that work organisations that encourage learning are becoming more widespread.

The quality of training

It is also conceivable that training is becoming more efficient and of higher quality; if so, this could compensate for the decline in training volumes. The second part of the report examines indicators of training quality, and how they have changed since 2006.

There are ongoing concerns about the quality of training for young people, especially when they undertake apprenticeships. Concerns in England surround the oversight of training and assessment, especially by new providers. There are also issues with the subcontracting of training provision, surrounding inadequate monitoring of the subcontracted provision, the opaqueness of the processes and the lack of regulation of lead provider fees. According to the OECD, some of the work-based learning aspects of apprenticeships, which are thought to be the cornerstone of their quality, are being neglected. There are also many calls for better regulation, including enforcement of the requirement that one-fifth of apprentices’ time should be devoted to off-the-job training.

The transition from apprenticeship frameworks to apprenticeship standards has also resulted in several quality issues, including a lack of available standards, which is affecting the recruitment of apprentices. Some programmes have no replacement apprenticeship standard at level 2 and there are fears that the access barriers for those most suited to a vocational course will increase. There are also ongoing tensions regarding the length of time taken on some apprenticeship programmes which, with an average of less than 18 months, is much shorter than the three to four years that is common in some other countries.

There is no single, commonly agreed quantitative indicator of training quality. Instead, this report brings together several indicators in a new analysis, based on worker-reported outcomes of training.

According to the ESS, the proportion of training that is certified to nationally recognised qualifications is falling; and the proportion of training that is exclusively for induction or for health and safety (usually driven by regulation) is on the rise, meaning that the extent to which training is broadening or deepening occupational skills is receding. Reports from individuals in either the SES (from 2006) or UKHLS (from 2010), however, indicate little change in either the proportion of training that is certified, or other self-reported measures of training quality: for example, the proportion of training that is held to develop skills ‘a lot’ has remained steady at 41 per cent. The evidence overall is unclear about whether there has been a distinct trend in training quality. The safest conclusion is that, if there has been a change over time in training quality, that change has been towards a decrease in quality, though not substantially.

What implications are there for the trend in job-related training’s overall contribution to skill upgrading? Taking the evidence in the round, the fact that there is no sign of a substantive improvement in training quality reinforces the pessimistic picture of training trends. With the long-term decline in training volume not being clearly counterbalanced by unambiguous increases in its quality, then policy-makers, employers and unions should not necessarily be confident about the prospects for raising and deepening future workforce skills and therefore living standards in this uncertain age. In the coming years, it will be important for government to monitor closely the volume and quality of training. Substantial reforms may be needed to reverse the apparently embedded decline in training volumes.

1. Introduction

Training has always been important for prosperity, but several factors combine, in the present day, to enhance the need for a well-functioning training system that would give all workers the opportunities to deepen and broaden their skills throughout their working lives (Foresight, 2017: ch 1). The spread of automation and artificial intelligence, not only in the manufacturing industry but also throughout the modern service sectors of the economy, are, according to many forecasts, set to displace jobs, even if others are to be created. An ageing population accompanied by later retirement is envisaged, indicating that individuals' skills will have to cope with more changes, including potential career switches, in the course of a working life. Self-employment and other insecure employment, which extends beyond just the gig economy, is increasing, while regional disparities in prosperity persist.

In the context of a post-Brexit Britain, with probable declines in the extent to which employers will be able to draw on migrant labour from European Union (EU) countries at all skill levels, the trend in training has acquired a particular urgency. At least 86 per cent of Britain's workforce, and still a big majority (65 per cent) of the 2040 workforce, is already in work today.¹ An upskilling of the workforce cannot therefore rely only on upgrading the education system. To a considerable extent this upskilling will need to be delivered through job-related training for workers of all ages. The Trades Union Congress (TUC), in its submission to the inquiry by Parliament's Education Select Committee into the quality of apprenticeships and skills training, has observed:

“As a nation, there are a number of key economic and social challenges facing us at present that require even greater efforts by government to empower all citizens to achieve, and regularly update, the skills

needed for sustainable well-paid employment. Two important factors in meeting this challenge are the availability of, and access to, suitable learning and training opportunities for young people and adults in their locality; and, the quality of learning and training provision that they can access.”²

To address these challenges, two salient policies now in place are the apprenticeship levy and the National Retraining Scheme. The Apprenticeship Levy has been in operation from May 2017; employers with an annual wage bill of more than £3m are levied, and can draw on funds to support apprenticeship training from approved providers. Meanwhile, an important aim of the government's Industrial Strategy, set out in November 2017, has been to “put the UK at the forefront of the artificial intelligence and data revolution”; one of the key new policies for investing in people, the National Retraining Scheme, is a government programme designed to support more adults at risk of automation to access retraining. In his October 2018 budget statement, the Chancellor pledged £100m for this scheme in its first phase, due to start in 2019.

In this report we present a picture of how job-related training has been trending in recent years, for those already in the workforce.

Trends

These policies are timely, given what is currently known about how far training is contributing to increase workforce skills in Britain. Unfavourable comparisons are regularly made between the extent and quality of apprenticeship training in Britain and the training provided in the ‘dual’ systems of Germany, Switzerland and Austria (Field, 2018). There is no evidence that this gap is being narrowed.

¹ These proportions assume that the age profile of the workforce remains the same; in fact, as the current workforce may remain longer in work before retirement, the proportions could be higher still.

² <http://data.parliament.uk/WrittenEvidence/CommitteeEvidence.svc/EvidenceDocument/Education/Quality%20of%20apprenticeships%20and%20skills%20training/written/76348.html>

When comparison is made of the ongoing training of the whole workforce, the evidence is ambivalent. Britain's record of participation in training is above average; and over time there have been only minor trends. This statistic may have led some to be confident that training beyond apprenticeships in Britain's workplaces was sufficient by international standards (e.g. Leitch Review of Skills, 2005). In 2011, the UK was held to have been better at implementing the Europe 2020 goals with respect to adult training (European Commission, 2011). Yet participation in any training, independently of volume or quality, is in itself not an adequate statistic to show how far workers' skills are being upgraded. An hour's training at induction, for example, is very different from an established employee being sent on a week's training course to acquire a new skill. As shown in Green *et al.* (2016), the volume of training for the average worker has declined steadily since the 1990s; this fall applied to all workers, though rather more so for the younger than the older. The falling volumes meant also that employers' expenditure on training also fell since at least 2006 when the first comparable figures are available. It was, particularly, off-the-job training hours that had been declining the most. As we note below, on one measure, expenditure on training has been much lower in the UK than in the EU as a whole.

On top of issues surrounding the downward trends in training volume and expenditure, the question of who gets access to training opportunities is a longstanding concern. Many studies have confirmed that training participation is greater in the public sector, for the more highly educated, for the young, for women compared with men, and for those working in larger workplaces (e.g. Fouarge *et al.*, 2013; Canduela *et al.*, 2012; Murphy *et al.*, 2008; Jones *et al.*, 2007). Training has tended also to be more prevalent in unionised workplaces; indeed, Britain's trades unions have had a direct role in facilitating training access through unionlearn (Stuart *et al.*, 2015). Access is also variable between ethnic groups: Shields and Wheatley Price (1999) found that non-white workers in the 1990s were offered and undertook less training than white workers. However, this gap

appears to have been reversed. The Social Mobility Commission (2019) has re-examined this and other findings using data from recent years; like others, it is especially concerned about the potentially cumulative adverse consequences for social mobility of the lower skilled receiving less training and upskilling than those who are already highly skilled from their previous education and training experiences.

There are also worries about the quality of training that does take place. This concern focuses mainly on apprenticeship training where weak regulation on work-based training, low requirements for off-the-job training and short duration have been identified as important issues. Yet, as regards other job-related training for workers of all ages, there has been relatively little data with which to evaluate its overall quality or how that compares with the training quality in other countries.

Objectives

It is therefore important to be able to follow the extent to which Britain's workforce skills are being updated through ongoing training.

For this purpose it is, of course, useful to know what the participation rate in training is. But the misleading picture that this statistic gave for previous trends should be a warning not to rely on this alone. There is a need for training statistics that matter, in particular statistics that allow policy-makers and all those involved in training to have an overall picture of the extent to which adult workers are continuing to acquire skills throughout their working lives. This means having statistics on both the volume and the quality of training.

There are no administrative records of all the training that employers fund and organise, or of the courses and the informal training that workers engage in; hence we rely on good-quality, nationally representative surveys for an overall picture. The overarching aim of this report, therefore, is to

consider what nationally representative surveys tell us about the important trends in training in Britain. In order to elucidate better the overall statistical picture of training in Britain today, and how it contributes to raising workers' skills, this report will:

- summarise the evidence on falling training volumes up till the end of the 2010s, and present new evidence from multiple surveys about how training volumes have changed in the period up to 2018
- present new survey evidence about trends in the quality of training in Britain: are there any signs of an improvement that might compensate for the falling training volumes previously noted, so that the overall skills improvement effort is holding up?

Training can be short or long, funded by employers, by workers or by government, aimed at different types of skills, and of variable quality. The surveys that we shall mainly draw on are the Quarterly Labour Force Survey (QLFS), the Skills and Employment Survey (SES), the UK Household Longitudinal Study (UKHLS), the Employer Skills Survey (ESS) and the Continuing Vocational Training Survey (CVTS). The first three of these are surveys of individuals and households; the last two are surveys of employers. The QLFS is carried out each quarter throughout every year; the relevant questions on training duration are asked in the second quarter. The SES (and its predecessors) has been carried out every four or five years since the 1980s, and it has been collecting data on workers' job-related training in a consistent manner since 2006. UKHLS, a replacement for the British Household Panel Study that ended in 2009, has been carried out every year since 2010. The ESS is a survey of establishments across Britain, carried out every two years, the latest in 2017. The CVTS is a survey of private enterprises conducted across the EU. More details about these surveys are available in the online annexe.³

³ Annexe is available at unionlearn.org.uk/publications/training-trends-britain

2. Recent trends in the volume of training

Training volume is a straightforward concept, meaning the duration of training undertaken within some given period – whether a week, a month or a year. It is an important concept if only because longer training duration implies more opportunity for learning and consolidating new skills. In the aggregate, it is the best single indicator of the extent to which the country's workforce skills are being augmented through training.

Green *et al.* (2016) tracked the changes in training volume over a 15-year period. Examining multiple data series, the study concluded that the average volume of training undertaken by workers in the UK had approximately halved between about 1997 and 2012. In contrast to analysis of the conventional indicator of training participation over a four-week period, as tracked by the Quarterly Labour Force Survey (QLFS), that study found a decline in participation in long-duration training episodes and other direct measures of training duration. These trends were consistent with training expenditures per employee, which also showed a downward trend.

The aim of this first section is to examine what has subsequently happened to training volume trends. To address this question, we follow the same approach as in the former study, utilising multiple data sets. Triangulating the picture from different surveys is useful because training can refer to a range of activities, can be defined over varying time periods (weeks, months, years), and can be reported from different perspectives (employers and employees).

Findings from the Quarterly Labour Force Survey

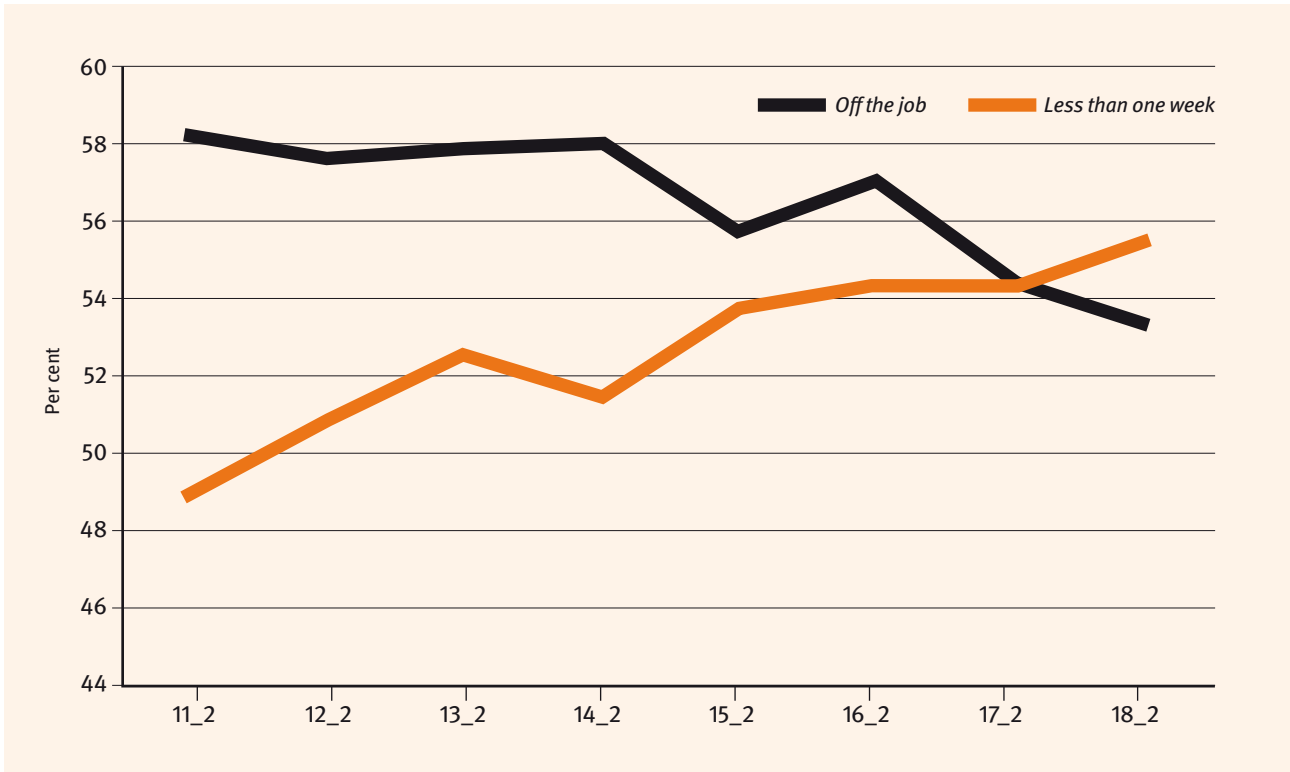
The QLFS is a prime source of official training statistics. It collects data on the rate of participation in training over a 13-week period, and over the previous four weeks. The four-week participation rate is presented in the first column of Table 1; it can be seen that there is a small amount of fluctuation over the years but no trend. A similar story holds for the 13-week

participation rate. It can be noted that the participation rate continues to differ between union members and non-union members. In the last quarter of 2017, 37 per cent of union members received training in the three months prior to interview, compared with 22 per cent of non-union members, a difference of 15 percentage points; this compares with the 16 percentage point 'union mark-up' in 2013, reported by Stuart *et al.* (2015). However, as noted above, the participation rate is far from perfect as an indicator of skills acquisition.

Green *et al.* (2016) used the QLFS to track the volume of training reported by each respondent in the week before the survey interview. But from 2011 the QLFS changed the way it asked about the length of training: instead of asking about the time spent training in the previous week, it switched to asking about time spent in the previous four weeks. This change followed a review of potential biases in the QLFS data – including the data on training – attributable to the use of interviewer proxies. We note the importance of proxy reporting, and adjust our indicator of training volume accordingly (see Felstead *et al.*, 1999). We couldn't find anything in the QLFS documentation giving the reasoning behind the specific decision to switch the time period. Nevertheless, from 2011 the QLFS contains consistent data relating to training hours over a four-week period. The question on training hours is asked in the second quarter of each year. Figures 1 and 2 and Table 1 show the findings.

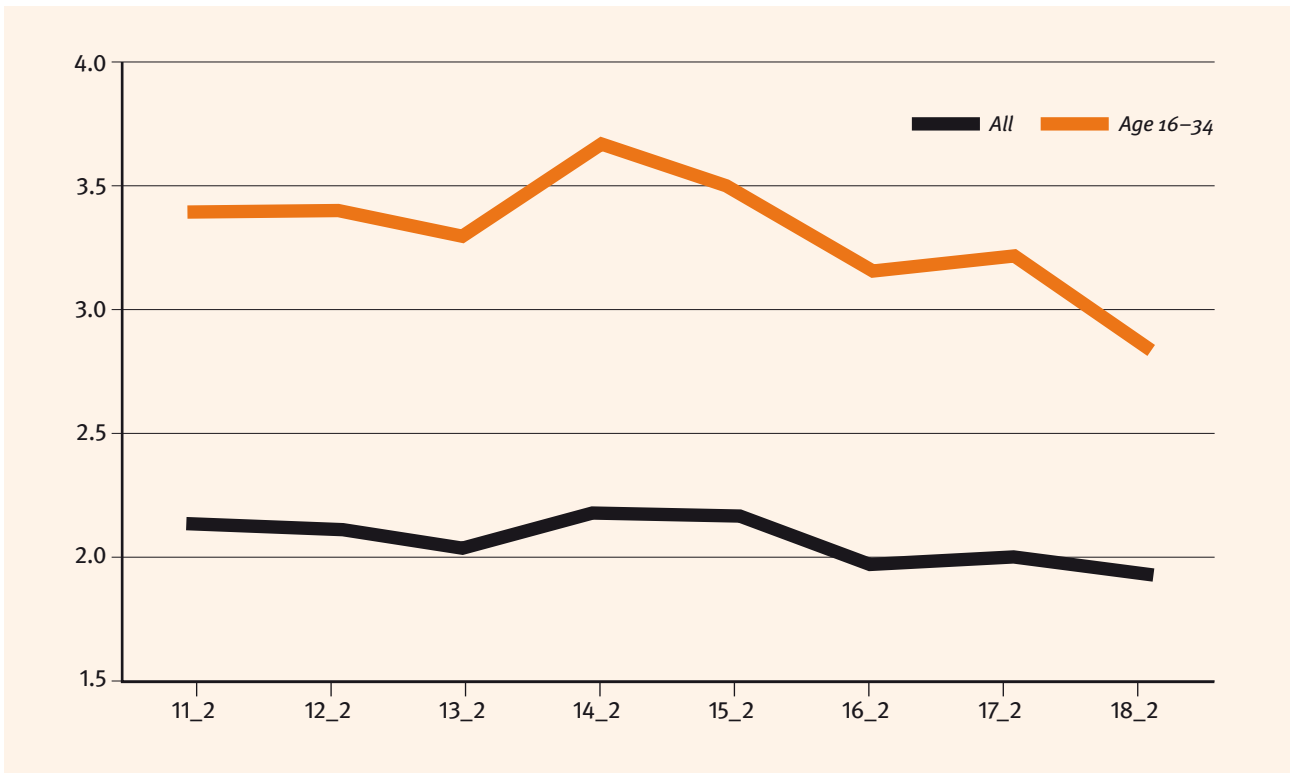
Figure 1 begins the analysis by updating two telling trends in the type of training that workers participate in. According to Green *et al.* (2016), the proportion of training spells that contained at least some off-the-job training had declined from the mid-1990s onwards. Figure 1 shows that the proportion off-the-job was just over 58 per cent in 2011, remained steady from then until 2014, after which a slow decline resumed, and by the second quarter of 2018 the proportion was down to 53 per cent; this compares with 73 per cent in 1995. As Table 1 reveals, the decline in the proportion of training that was off-the-job was greatest among older workers. While the fact that a training spell takes place off the job says nothing

Figure 1: Training length^a and site^b, 2011–18



Source: QLFS (2nd quarter). Persons in employment, age range 16–65.
 a. Per cent of training episodes lasting less than 1 week b. Per cent undertaken partially or completely away from the job.

Figure 2: Training volume^a per UK worker, 2011–18



Source: QLFS, 2nd quarters. Persons in employment, age range 16–65.
 a. Hours per four-week period.

Table 1: Training trends, 2011–18

	4-week participation rate (%) ^a	Volume of training per worker (hours per 4-week) ^b	Volume of training per training participant (hours per 4-week)	% off the job ^c	% short spell ^d
All					
2011	12.9	2.15	16.6	58.2	48.9
2012	13.1	2.12	16.2	57.6	50.9
2013	13.5	2.04	15.1	57.9	52.5
2014	13.3	2.19	16.4	58.0	51.4
2015	12.6	2.17	17.2	55.7	53.8
2016	12.5	1.97	15.7	57.1	54.3
2017	12.6	2.02	16.1	54.5	54.3
2018	12.9	1.93	15.0	53.3	55.5
Age 16–34					
2011	15.6	3.39	21.7	59.4	32.4
2012	15.6	3.42	21.9	59.5	34.3
2013	15.8	3.29	20.8	60.2	36.3
2014	16.2	3.67	22.7	60.7	35.5
2015	15.1	3.48	23.1	58.8	37.2
2016	14.6	3.15	21.6	61.8	38.4
2017	14.9	3.23	21.7	58.1	37.9
2018	14.9	2.84	19.1	57.0	39.0
Age 35–49					
2011	12.5	2.31	18.5	59.4	56.7
2012	12.7	2.36	18.6	59.5	57.1
2013	13.2	2.32	17.5	60.2	60.0
2014	12.8	2.24	17.4	60.7	58.0
2015	11.9	2.44	20.6	58.8	60.7
2016	12.3	2.26	18.3	61.8	60.5
2017	11.8	2.39	20.2	58.1	60.3
2018	12.7	2.33	18.4	57.0	60.8
Age 50–65					
2011	10.0	1.19	12.0	54.3	66.5
2012	10.4	1.12	10.8	53.1	69.5
2013	10.6	1.08	10.1	54.3	68.9
2014	10.2	1.22	11.9	54.4	70.3
2015	10.5	1.31	12.5	49.4	70.6
2016	10.2	1.10	10.8	51.9	70.5
2017	10.5	1.22	11.5	49.0	71.6
2018	10.8	1.21	11.2	46.0	73.1

Source: QLFS, 2nd quarter

- Per cent of workers undertaking any job-related training in previous four weeks.
- Training hours per worker are derived from multiplying training hours per trainee (as calculated only from those giving personal responses) by the participation rate. A small number (1 per cent) of those who said that they had been doing training reported that their hours of training were zero. We assume that these undertook a very small amount of training, and leave the calculation of the participation rate unchanged. Hours of '97 or more' are coded as 97.
- Per cent of training undertaken partially or completely away from the job.
- Per cent of training courses lasting less than 1 week.

Table 2: Trends in training hours per worker by education level and by sex

	Higher qualifications	Mid-level Qualifications	Low qualifications	Female	Male
2011	2.95	1.94	0.76	2.28	2.06
2012	2.84	1.92	0.84	2.25	2.04
2013	2.60	1.96	0.71	2.19	1.92
2014	2.79	2.08	0.88	2.24	2.18
2015	2.74	2.10	0.77	2.40	1.99
2016	2.63	1.71	0.70	2.07	1.90
2017	2.46	2.04	0.68	2.17	1.90
2018	2.49	1.79	0.62	2.10	1.80

Source: QLFS, 2nd quarter

Notes: Training hours per worker: see Table 1, note b. Higher qualifications: any higher education; mid-level: GCSE A*-C, A levels and equivalents; low: less than GCSE A*-C, 'other' or none.

directly about the volume of that training, off-the-job training involves on average substantially more hours of training than on-the-job training; its continued decline, therefore, is indirectly a source of concern.

An inverse indicator of training volume is the proportion of training courses that are 'short', that is, last less than one week. This proportion had been rising steadily since 1996 when it was about 34 per cent. Figure 1 shows that the share of these short training spells rose still further in the 2011–18 period, with a downward blip only in 2014. By 2018, some 56 per cent of training courses were lasting less than a week. For young people, aged 16–34, the proportion of training courses that were short rose especially sharply, from 32 per cent in 2011 to 39 per cent in 2018. Yet older workers, aged 50–65, also experienced a rise in short courses, from 67 per cent to 73 per cent.

As for direct measures, weekly training volume had fallen by 44 per cent between 1997 and 2009 (Green *et al.*, 2016). Turning to the new measure, our period begins with training volume averaging 2.15 hours per worker per 4-week period, in the second quarter of 2011, equivalent to 0.54 hours per week; this compares with a volume of 0.69 hours per week recorded in 2010, using the previous method where

respondents reported only on training in the previous week. The sharp difference is possibly attributable to recall bias, with some respondents failing to include all the hours spent training up to four weeks previously.

Whatever the reason for this step change, the recent trend is revealed using consistent methods. Figure 2 and Table 1 show a modest but significant decline, over 2011–18, from 2.15 to 1.93 hours per week per employed worker (a 10.2 per cent fall). Breaking this down by age reveals, however, that both for middle-career and for older workers there was virtually no change in the volume of training over this period. For all workers taken together the decline was not evident until after 2015; but among young people aged 16–34 the decline began after 2014 and was particularly sharp – being 16 per cent over the whole period.

Table 2 shows the trend in training hours per worker according to education level. As is commonly found (e.g. Social Mobility Commission, 2019) those who have earlier received more education also receive more job-related training in adult life. The higher educated tend to be in jobs that require and offer the most opportunities for upskilling; in 2018 they spent on average four times as many hours in training as those with low or no qualifications.

Those with mid-level qualifications – at A level, GCSE or equivalents – received just under three times as much as those with low or no qualifications.

All three education groups experienced declines in training volume over the 2011–18 period, but the low education group experienced proportionately the greatest decline: from 0.76 and 0.80 hours in 2011 and 2012 respectively, down to 0.68 and 0.62 hours in 2017 and 2018 – a fall of approximately 20 per cent – that is, twice as fast as for the whole workforce taken together.

Another common finding in Britain is that women participate more in training than men; this has been the case since the early 1990s, before which the gender difference in training was in the opposite direction (Green, 1991; Jones *et al.*, 2007). Table 2 shows that this difference is also reflected in the volume of training, in the present era. Women experienced more job-related training than men at the start of the 2011–18 period, the difference being 10 per cent. Over the period training volumes declined for both men and women. However, the volume fell somewhat more for men than for women, so that by 2018 men’s experience of training was even further behind: the gender difference had reached 14 per cent.

Findings from the Skills and Employment Survey

The SES is a second source of training data where the individual is the informant. The SES takes a different approach from the QLFS to asking about training: rather than leaving the respondent to interpret the word ‘training’, they are asked to respond separately to explicitly specified types of training. The respondent can answer that they received any of the types of training listed in the first column of Table 4, or report that they had done none of them. The training activity most frequently engaged in, by 38 per cent of employed workers, was instruction on the job, while just 3 per cent reported doing job-related training in

evening classes. The survey then asked for the number of days over the year in which each type of training activity was engaged in. There are obvious issues of recall when asking about activities over a whole year. We expect that some minor episodes of training will have been forgotten, if undertaken months before the survey interview; moreover, respondents cannot be expected to always recall accurately the timing of episodes, in particular whether they occurred within or before the period being asked about. Nevertheless, these potential errors are the same for every wave; the trend picture should therefore be informative.

The overall participation rate in any kind of training over the year fluctuated between the three waves of the survey – 2006, 2012 and 2017 (see Table 3). Table 4 shows that the numbers of days of all explicit types of training fell between 2006 and 2012, confirming what was reported in the earlier study (Green *et al.*, 2016).

Then between 2012 and 2017, there was an 18 per cent fall (from 15.8 to 12.9) in the days of on-the-job instruction per worker. There was no significant change in the days spent on any other kind of training. In particular, the observed drop in off-the-job training or instruction is small; however, it can be noted that for those aged up to 34 there is a notable fall of 1.4 days (not shown in the table).

Findings from the UK Household Longitudinal Study

The UKHLS is a third good source of training data where the individual worker is the informant. Its predecessor, the British Household Panel Study (BHPS) was an important part of the evidence in Green *et al.* (2016). Training volume had been declining, according to the BHPS, since 1997/8, dropping to 6 days per year in 2007/8 (Green *et al.*, 2016).

The UKHLS replaced the BHPS in 2009/10. Also a longitudinal survey, it covers many more households (approximately 40,000). Beginning with the first

Table 3: Annual training participation rate (%) in the UK in 2006, 2012 and 2017

	All aged 20–65	Aged 20–34	Aged 35–65
2006	65.1	69.5	63.0
2012	68.3	73.0	65.8
2017	62.9	63.9	62.4

Source: SES Base: all in employment in Britain

Table 4: Days participated in each of several training activities

	2006		2012		2017	
	<i>per worker</i>	<i>per trainee</i>	<i>per worker</i>	<i>per trainee</i>	<i>per worker</i>	<i>per trainee</i>
Instruction or training off the job	3.9	11.8	2.8	8.9	2.4	9.0
Instruction on the job	23.0	62.8	15.8	43.7	12.9	41.2
Self-taught (from a book/ manual/ video/computer/ DVD/internet)	15.4	59.9	11.7	41.1	12.6	46.5
Correspondence or internet course (such as Open University)	2.2	50.4	2.0	30.4	2.0	25.8
Evening class	1.0	28.4	0.5	15.1	0.4	19.4
Some other work-related training	6.5	31.7	3.5	15.5	3.3	15.5

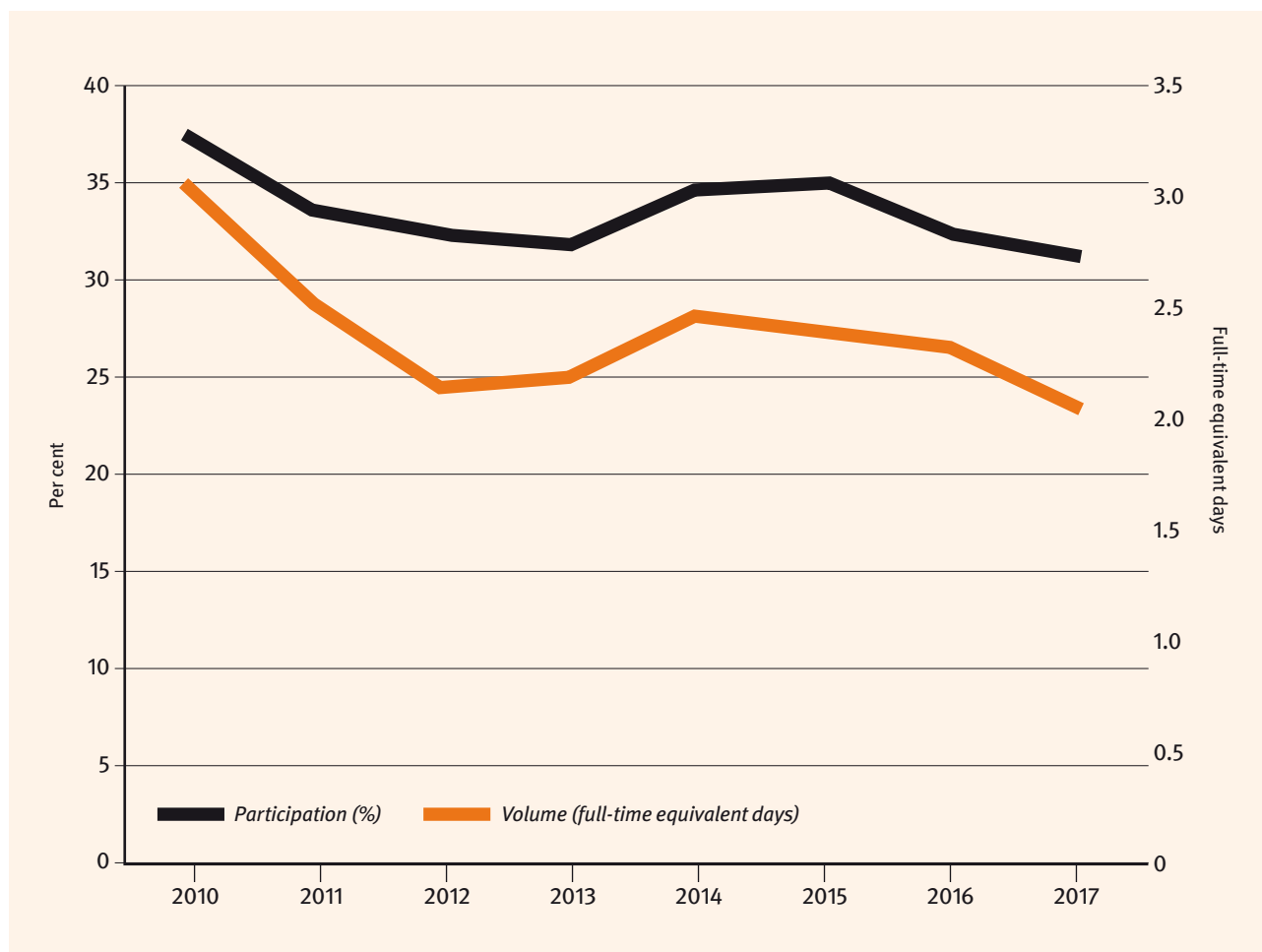
Source: SES. For each activity respondents report how many separate days in the year that they have followed each activity.

Notes: 'Trainee', in this table, refers to anyone who has participated in each particular activity.

sweep of UKHLSs in 2010, there is a run of seven years of available data until the 2017 wave. At each wave the respondents are asked: “Since we last interviewed you on [date], have you done any training schemes or courses, even if they are not finished yet? Please include any part-time or evening courses, training provided by an employer, day-release schemes, and government training schemes.” If answered in the affirmative, the question is followed up by “How

many training schemes or courses have you been on?” before the survey instrument branches out to enquire for each attended course: “During the last 12 months, on how many days did you attend that training course?” and “On average and not including breaks, lunch or travel time, how many hours each/that day did you spend on that course?”. We combine this information to derive a measure of training volume: the number of full-time equivalent

Figure 3: Training participation and volume in last year



Source: UKHLS

training days per employed person per year.⁴ This measure notably excludes on-the-job training.

In the first wave in 2010, training volume per worker averages 3.1 days per year. The trend since then is shown in Figure 3 and Table 5. As can be seen on the lower line, training volume per employee declined

sharply from 2010 until 2012, by which time the average training volume among all employed adults was down to 2.1 work days. However, the decline was halted at that point. After 2012, training volume across all ages rose until 2014 (while the training participation rate continued to edge up until 2015), before dropping back down to 2.0, below its 2012 low, in 2017.

⁴ To derive the measure, we first calculate the total hours of training from the reported number of days in training and the average hours of training per training participant. Next, we divide this sum by 7.5h to get the number of full-time equivalent days in training. This we average across the employed workforce and the group of trainees, respectively.

Table 5: Training participation rates and training volume in the UK, 2010–17

	Participation rate (%) ^a	Volume per worker (days per annum) ^b	Volume per trainee (days per annum) ^c
All			
2010	37	3.1	8.2
2011	34	2.5	7.5
2012	32	2.1	6.6
2013	32	2.2	6.9
2014	35	2.5	7.2
2015	35	2.4	7.0
2016	32	2.3	7.2
2017	31	2.0	6.7
Age 16–34			
2010	40	4.2	10.5
2011	35	3.2	9.4
2012	35	2.9	8.4
2013	34	3.1	9.1
2014	37	3.8	10.3
2015	38	3.8	10.0
2016	35	3.8	10.9
2017	33	3.0	9.4
Age 35–49			
2010	38	3.0	7.9
2011	35	2.5	7.2
2012	33	2.0	6.2
2013	32	2.1	6.5
2014	36	2.3	6.4
2015	36	2.2	6.2
2016	33	2.0	6.1
2017	33	1.8	5.7
Age 50–65			
2010	34	2.1	6.1
2011	31	1.9	6.1
2012	30	1.6	5.3
2013	29	1.5	5.2
2014	31	1.5	4.8
2015	31	1.4	4.7
2016	29	1.5	5.1
2017	28	1.4	5.2

Source: UKHLS, employed workforce aged 20–65 years. Respondent are asked to report on the number of training schemes followed since the last survey interview, the number of days spent at each training scheme, and the average number of hours training per day in training.

- Per cent of workers who have undertaken any training schemes or courses such as part-time or evening courses, training provided by employer, day-release schemes, or government training schemes since the last survey interview.
- Total number of hours in any training since the last survey interview, set to zero if UKHLS member did not participate in any training, averaged over all survey participants in work, divided by 7.5.
- As b. but averaged over all survey participants who have undertaken any training in the period between survey interviews.

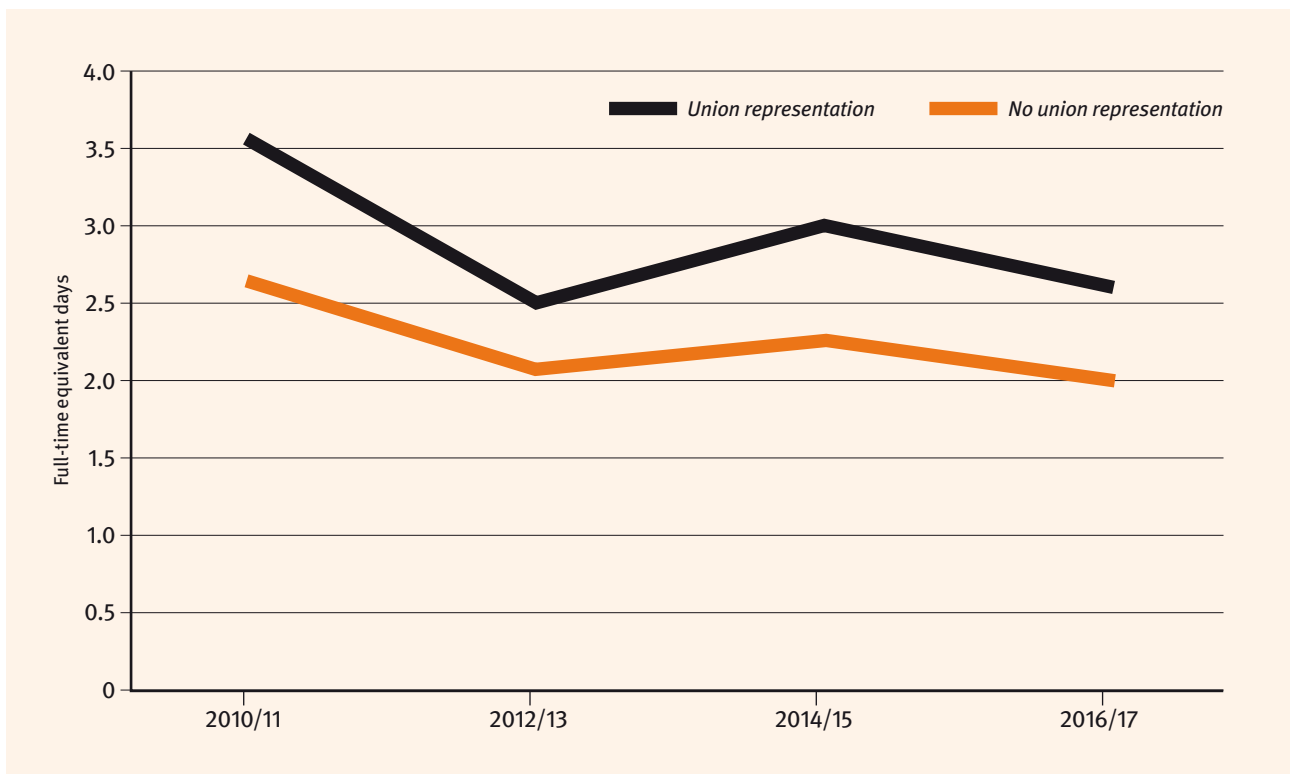
Table 6: Trends in training volume per worker by education level and by sex

	Higher qualifications	Mid-level Qualifications	Low qualifications	Female	Male
2010	3.9	3.1	2.0	3.0	3.1
2011	3.2	2.9	1.4	2.6	2.5
2012	2.7	2.3	1.2	2.2	2.0
2013	2.7	2.5	1.2	2.3	2.1
2014	3.0	2.9	1.3	2.5	2.5
2015	2.8	2.9	1.4	2.3	2.5
2016	2.7	2.9	1.2	2.4	2.3
2017	2.5	2.2	1.2	2.4	1.7

Source: See Table 5: Training volume per worker; see Table 5, note b.

Notes: Higher qualifications: any higher education; mid-level: A-level and equivalent; low qualification: GCSE, none or other.

Figure 4: Training volume in the UK by workplace unionisation, 2010–17



Source: Training volume per employee: see Table 5, note b.

Over the entire period, the fall in training participation was sharpest among those aged 20–34. In this group, the participation rate dropped from 40 per cent to 33 per cent. The reduction in training volume, however, was most pronounced among workers aged 35–49: for them, training days per worker fell by 38 per cent and training days per trainee by more than a quarter.

As with the QLFS data, training volume fell faster among male than among female workers, and dropped relatively more sharply for workers with low qualifications than for those with mid-level or higher qualifications (see Table 6). The training advantage of workers with high qualification over those with low qualification rose by 20 points from 95 per cent in 2010 to 116 per cent in 2017.

Previous studies (Green *et al.*, 1999; Stuart *et al.*, 2015) have shown that training participation in Britain tends to be greater in unionised establishments. That pattern is repeated, in respect of training volume, in the UKHLS data. For all of our period, training volume was somewhat higher at workplaces with union representation or a staff association than in non-unionised workplaces (see Figure 4). The trends in the union and the non-union sectors have a similar pattern, with training falling up to 2012, and again after 2015, but rising in the intervening period. On average, over the period, workers with union representation spent 19 per cent more time in training than those without union representation.

Findings from the Employer Skills Survey

Until this point, the training data we have analysed came from the individual workers who may, or may not, have done some training in the period prior to when they were interviewed. An alternative prime source of high-quality training data, which has employers as its informants, is the Employer Skills Survey (ESS). While overlapping substantially with the sorts of training that an individual worker might describe, one would not expect employers or managers to report about any training their employees were doing in their non-work time, even if that training is job-related. Moreover, even some of the informal training done in work time might not get recorded by employers when it consists primarily of training while on the job, and where there are no perceived costs in terms of lost productivity. On the other hand, training that is organised by the human resources department might be picked up more reliably and registered more accurately than by employees who, in the case of UKHLS, may or may not remember all of their training months later. Nevertheless, the changes over time would expect to measure the training trends accurately, as long as the data is collected in the same way for each survey – which it is. The 2017 ESS reports on training received in the previous 12 months prior to the interview, with those interviews taking place between May and October. Thus the survey mainly covers the picture up until a few months after the start of the Apprenticeship

Table 7: Employees’ training participation rate, days participated and expenditure, 2011–17

	Percentage of employers providing training	Volume per employee (days per annum)	Volume per trainee (days per annum)	Expenditure per employee (£) (2017 prices)
2011	65	4.2	7.8	1,620
2013	66	4.2	6.7	1,520
2015	66	4.2	6.8	1,570
2017	66	4.0	6.4	1,530

Source: ESS, Winterbotham *et al.* (2018)

Levy (April 2017). The training expenditure is collected through a separate and subsequent survey, drawing its sample from those who had completed the main survey and had provided some training for their staff over the previous 12 months.

Table 7 summarises the findings on training volume from the ESS report (Winterbotham *et al.*, 2017). The training volume in 2017 was 4.0 days per employee per year. This overall volume is about a third more than the yearly equivalent of the volumes reported by the individuals in the QLFS. In 2017 the estimated annual cost of training was £1,530 per employee, which equates to £2,470 per trainee. This expenditure includes the costs of training equipment, external fees and trainers, and the costs of employees being released from their daily tasks while on training courses.

In the two years prior to 2011, the training volume in England had fallen by over 6 per cent (Green *et al.*, 2016). The main conclusion about subsequent trends is that the volume of training fell by a small amount, with the fall taking place after 2015. Expenditure on training fell also, but the fall occurred between 2011 and 2013. Also notable among the reported changes is the rise, from 2015 to 2017, in the use of online training/e-learning: the proportion of employers offering this kind of training was 45 per cent in 2015 and 51 per cent in 2017.

Findings from the Continuing Vocational Training Survey

The CVTS is another source of training data with the employer as informant (Wiseman and Parry, 2018). It is commissioned every five years by the EU, and covers training over a calendar year. While the survey began in the 1990s, previously successive surveys have not been strictly comparable in their methodology. The 2015 survey, however, was conducted using a methodology sufficiently comparable to that of the 2010 survey to allow valid comparisons.

Table 8 shows the key findings of CVTS about the trends in the UK. While the participation rate declined by a small amount, the volume of training increased substantially. There was also a rise in training expenditure. The increase in costs per employee training participant was substantial: 73 per cent in nominal terms, though this needs to be set against a 16 per cent inflation over the period. In 2015, the cost was estimated to be £1,320 per training participant. One interesting finding from the data concerns the share of training courses that is occasioned by mandatory health and safety regulations: this proportion increased substantially over 2010 to 2015.

The large contrast between these findings and those of ESS requires comment. The CVTS figure for training volumes is very small (only 0.5 per cent of hours worked) and very much lower, compared

Table 8: Employees' training participation rate and hours participated, 2010 and 2015

	Participation rate (%)	Volume per employee (hours per annum)	Volume per trainee (hours per annum)	Proportion of hours spent on mandatory training (%)
2010	31	7.7	26	26
2015	30	9.2	30	36

Source: CVTS

with ESS, by a factor of about four. The CVTS's estimate of training expenditures per training participant are also much lower than those of ESS: in this case by a factor of two. The CVTS trend is, if anything, upwards and optimistic in respect of both volume and expenditure, unlike the ESS.

What might explain these divergent results? The ESS is a large survey of establishments (approximately 87,000), sampling establishments with at least two workers; a 43 per cent response rate of contacted establishments was achieved in 2017. By contrast, the CVTS in 2015 is a much smaller survey of enterprises (3,315 cases) where there are at least 10 workers. It is restricted to the private sector, and excludes agriculture and related sectors; a 37 per cent response rate was achieved. The domain coverage for ESS is all forms of training, while CVTS excludes initial training for new employees. The two surveys thus have varying characteristics and different content.

Each survey has its advantages but, given the need to form our best assessment about training volume trends, we must make a judgement about which of these two surveys most accurately captures what has been happening 'on the ground'. Leaving aside its much greater size, there are reasons to believe that the high-quality ESS presents the more reliable national picture. Apart from its somewhat higher response rate, one of its key advantages is that its respondents are the managers at establishment level, who are likely to be better informed about training activities in the establishments where they are based, than enterprise managers at head offices. In addition, ESS's broader coverage by size and sector, in particular its inclusion of public sector workers, makes it more useful as a nationally representative survey. The ESS's estimate of the volume of training is fairly close to the estimates obtained from either the QLFS or the UKHLS. By contrast, the exclusion of the public sector from CVTS may have masked the changes after 2010, since it was in this sector where some of the strongest effects

of austerity-driven retrenchment were experienced. Significantly, the years covered also differ, with CVTS covering only up to 2015. The other surveys showed 2015 to be a year of relatively high training volumes, with a notable decline thereafter; the CVTS does not provide evidence about the subsequent three years.

Where the CVTS scores, however, is in having internationally consistent indicators of training volume, across the EU. In 2015, the training volume in the UK enterprise sector was 5.3 hours per 1000 hours worked, as compared with a 6.2-hour average for the whole EU. The resource cost per person employed was only 39 per cent of the EU average spend.⁵

Summary of changes in training volume since the late 1990s

In the light of these recent trends, what can be said of the long-term trend in training volumes for Britain's workforce?

The volumes of training per employee fell by 44 per cent between 1997 and 2009 (Green *et al.*, 2016), and was still falling rapidly – by about 6 per cent – between 2009 and 2011.

The latest findings from the QLFS, UKHLS and ESS show estimates of training volume that are relatively close to each other. The estimates in the most recently available data are all in the range of two to four days per year per employee. Considering that they differ in their methodologies and in their geographical scope, some differences are to be expected; the fact they are of the same order of magnitude is reassuring and suggests that they are presenting a reliable picture.

Moreover, they also present a similar picture of the trend. Specifically, all three show a modest but significant downward change in the years since the

⁵ Source: Eurostat.

start of the current decade, up to the latest available data: by 10 per cent over 2011–18 in the QLFS, by 19 per cent over 2011–17 in the UKHLS, and by 5 per cent over 2011–17 in the ESS. There is some difference between surveys in the timing of the decline: the UKHLS measure dropped especially fast over 2010–12. With the QLFS, the recent downward trend really emerges clearly only after 2015. Nevertheless, both the QLFS and the UKHLS show 2015 to be a year with relatively high training volumes, but that after then a significant decline resumed. Meanwhile the SES, with its less regular coverage, also showed an 18 per cent decline in the number of days in which on-the-job instruction took place over 2012–17.

Corroborating evidence comes from the continuing upward trend in the share of short training courses shown in the QLFS, and the continuing decline in the extent to which each spell of off-the-job training is conducted. The ESS shows, however, that in recent years online training has bucked the trend, with increasing use of online materials for training.

Further corroborating evidence derives from the estimates of the amount that employers spend on training. The total employer investment in training in England was £33.3 billion in 2005. While this rose to £40.5 billion in 2011, once inflation and the expanding workforce are factored in, this translates into a fall of 14.5 per cent in real terms spending on training per worker (Green *et al.*, 2016; Davies *et al.*, 2012). Then, from 2011, the scope switches to the UK as a whole: after 2011 expenditure per trainee fell by a further 6 per cent. Put together with the earlier change, the changes amount to a fall of about a fifth between 2006 and 2017. The timing of the drop is not the same as with the individual-based surveys of training volume, but the direction of change is the same.

Because of the changed methodologies in the QLFS and the switch from the BHPS to the UKHLS, it is not possible to add the earlier changes prior to 2010 to the subsequent changes in order to arrive at an overall figure for the change in training volumes from the late 1990s up to the present.

Nevertheless, it can be concluded that overall the last two decades have seen a very substantial decline in the amount of time that workers spend training.

Possible explanations

Why has the volume of training been falling? Several possible explanations can be considered.

First, the decline may directly reflect a slowdown in the growth of skills demand. One way in which this could occur is if a significant portion of employers become embedded in a ‘low-skills equilibrium’, from which neither employers nor workers have the incentives and opportunities to break away. In a low-skills equilibrium, employers may lack the capacity and be constrained by skill shortages from expanding into new markets, and simply offer a high proportion of low-skill jobs with few prospects, producing low-value-added products and services. With few incentives and opportunities for training, workforce skills remain static, and this in turn helps to constrain the ambitions of employers. According to analyses by the OECD and others, many rural and coastal areas, and some parts of north-west England, south-west Scotland, Wales and eastern England are characterised as in a low-skills equilibrium (Foresight, 2017, ch 6; OECD, 2014; Green, 2016). A widespread decline, since the 1990s, in the incentives for training is one plausible explanation for the declining volumes. The fact that Britain’s training volumes in the enterprise sector seem to be low by international comparison could also be consistent with this explanation.

Another possible argument focusing on declining demand surrounds the idea of ‘barriers’ to training: both employers and employees can face barriers, in the sense that they may lack the information or capacities to evaluate the potential benefits of skill broadening and deepening; this hypothesis, it should be noted, is distinct from the idea of low-skills equilibrium with its focus on incentives. There is, however, little evidence from the surveys, one way or the other, of whether widening barriers could

be the source of the decline in training volumes. Nearly nine out of ten workers, according to the SES, consider that the training they receive is adequate, and this has changed little over time: similarly, 85 per cent of companies perceive that they have met all their training needs, according to the CVTS. Very few employers or workers report that they did less training because they lacked information or the capacity to assess training's benefits. However, it must be admitted that surveys do not necessarily help to evaluate the importance of this explanation, because any respondents who lack the capacity to seek out, evaluate and act on training opportunities may not reveal this in their responses. Moreover, the low training volumes undertaken by low-skilled workers no doubt reflects in part the lack of opportunities for training in the jobs available to them in their localities.

Yet another possible explanation focusing on declining demand for upskilling would attribute it to reduced government spending. As noted by the Social Mobility Commission (2019), the government's adult skills budget was severely cut during the period of austerity after 2010 in the wake of the financial crisis. However, as its report also notes, only a small proportion (7 per cent) of the resources spent on training the employed workforce comes from government. The government cuts may have exacerbated the fall in the volume of younger people's training and of all adults taking up training independently outside of their workplace (e.g. by attending college evening classes). But it would be wrong to attribute the decline in training volumes to the government's reductions; besides, the general fall in training activity had been continuing for at least a decade before the financial crash.

A final argument about declining demand is the possibility that the demands for upskilling are diminishing as the workforce becomes more educated and therefore less in need of remedial training. Undoubtedly, the fact that the younger half of the workforce has received more years of schooling than the older half means that, as the workforce ages, it is composed more of workers with significant educational achievements. Whereas in the 1990s

one in five of the employed workforce had gained no qualifications, by 2017 this was true of only one in twenty. Nevertheless, this explanation for falling training has not been substantiated. Most training is to impart job-related knowledge and skills, that could not anyway be taught in the schoolroom. The decline in training volumes has occurred for workers at all education levels and in occupations at all levels.

Alternatively, rather than reflecting a declining demand for upskilling, it could also be argued that training might have been increasingly substituted by on-the-job learning, as jobs were redesigned to ensure that jobholders were learning new things as they worked. In this perspective, the need to upskill the workforce is as great as ever, but evolving work organisation is enabling the learning of new skills through means other than formal training. This explanation could be valid for many organisations. In 2006, 50 per cent of employees, according to the SES, agreed that they were able to learn new skills through working with other members of a team; and 31 per cent strongly agreed that it was their job to help others learn new things. These proportions had risen by 2017 to, respectively, 56 per cent and 34 per cent. Nevertheless, though plausible, this potential explanation is hard to substantiate in the round. There is no evidence of a substantive growth of high-involvement organisations in Britain in recent years. For the present, this explanation must remain on the table, in need of further substantiation.

Finally, another possible reason for the decline in the hours of training is that training may have become more efficient. Perhaps each hour of training has become more effective in delivering the upgraded skills that workers and employers need. More online training materials have become available over time and it is possible that trainers have become better at course delivery. If so, one could say that the quality of each hour of training would have risen. Until now, even though much has been debated surrounding the quality of training for young people, it has not been possible to evaluate whether the quality of training has been systematically improving in Britain. It is to this question that the next part of our report is devoted.

3. Recent trends in the quality of training

“There is quality that applies to the individual undertaking the apprenticeship so that they come out with an increase in skills and knowledge, and their employability and opportunity for work has increased. For women, we are particularly concerned, too, that they have skills that are transferrable.” Carole East, Chief Executive, Young Women’s Trust. Evidence to the House of Commons Education Committee, 16/1/2018

The quality of any job-related training, whether undertaken on the job or off the job, is the extent to which it helps workers become more skilled in some way (Green, 2013). Normally, one would expect a longer course to deliver more learning: more time not only allows for more areas to be covered, it also allows a more productive mix of on-the-job and academic off-the-job learning and for important features of effective work-based learning such as reflective learning and learning to learn. But high-quality courses of training will also be more effective than others in the same amount of time. One relevant measure is the ‘unit training quality’ – the amount that skills are enhanced in each hour spent in training. In practice, however, indicators of training quality are normally indicators of the quality of a particular course of training, or summary measures of the training quality experienced over a period of time, which depends on both the unit training quality and the volume of training (Green *et al.*, 2016).

Understanding of what makes for good-quality, work-based learning and training has progressed considerably in recent decades (e.g. Engeström, 2001; Fuller and Unwin, 2004). It is recognised, for example, that a good part of learning and training is informal, and that the learning is likely to be ‘deeper’ if employees’ horizons are expanded as a result of the training, and if they are exposed to new ideas and can experiment. This contrasts with training where workers learn by rote, adopt set procedures, and stay inside fixed boundaries. With apprenticeships,

the importance – for high quality – of combining work-based learning with classroom learning is recognised, as is the need for an introduction to occupational communities of practice, and for qualifications to be used as a basis for progression.⁶

Despite this deeper understanding, it is hard to generate quantitative indicators that directly capture the quality of training and learning processes. To identify good-quality training, therefore, researchers have looked to indicators of what it leads to: either direct measures of skills acquisition or measures of the consequences of skills acquisition. For workers, these consequences could be financial (higher wages), or an improvement in the intrinsic quality of their job, or a different and better job. For employers, benefits could show up as improved productivity, increased staff morale, lower turnover and, ultimately, improved business performance.

Without some form of regulation or social intervention, there are reasons to expect that the quality of training will be less than optimal. Better training quality requires resources, and just as employers can be reluctant to bear the cost of training employees at all, for fear that their trained workers will leave and work for others, for the same reason they can also be reluctant to provide a high quality of training. Employers may have an incentive to provide narrowly focused training, attuned to their own needs, rather than those of the wider industry. They may also have an incentive to try to shift the cost of the training onto their trainees. To bring about a satisfactory quality of training, then, may require oversight and regulation both over the pay of trainees, and the quality of the training. Policies for better training may also try to bring about an alignment of the training incentives facing employers and employees. Unions and employer federations typically have degrees of oversight on apprenticeships in dual systems, including over the content of training required to be part of apprenticeships. The relatively weak role of unions in

⁶ For a summary review of some key findings, see the online annexe at unionlearn.org.uk/publications/training-trends-britain

the UK, by contrast, is highlighted in the OECD's 2017 assessment of UK skills policy: "Trade unions should also be involved in the process of apprenticeship standard setting, perhaps with representation on the Institute for Apprenticeships." It adds that in the UK "consulting with trade unions in the design of apprenticeship standards could improve their quality by, for example, ensuring that standards do not become too job-specific and provide apprentices with sufficient transversal skills". (OECD, 2017).

What factors are associated, in practice, with good-quality training? These are not necessarily the same factors normally linked with training participation, such as the size of the workplace or the worker's occupation, industry or education level. Rather, two features of good training stand out from the research evidence: the manner and extent to which the training is regulated (as just noted); and the organisation of the workplace. Workplaces where employees are afforded a high level of involvement are more likely to deliver training that is of higher quality (Felstead *et al.*, 2010). This is especially the case where the involvement comes through teamworking, where employees not only feel that they can influence the way that they do their own jobs but also report an abundance of ways in which they can be more generally involved in the organisation they work for – such as through group bonuses, or through meetings where they can express their views to management. Unlike with training participation, however, there is relatively little research about how other factors, such as gender or ethnicity, are associated with training quality.

It is fair to say that much of what is written about the quality of training in Britain today is critical, especially in the area of apprenticeships where many quality issues are seen as systemic (Field, 2018). Concerns have been expressed surrounding the oversight of training and assessment in England, especially by new providers (House of Commons,

2018a: pp 11–12). There are also issues with the subcontracting of training provision, surrounding inadequate monitoring of the subcontracted provision, the opaqueness of the processes and the lack of regulation of lead provider fees (House of Commons, 2018a: pp 20–1). It is suggested that the frequent use of subcontracted provision is leading in England to neglect of the work-based learning aspects of apprenticeships, which are thought to be the cornerstone of their quality. As a recent OECD study observed: "This leaves the traditional heart of apprenticeship – training provided in the workplace by an employer – in a marginal position, as it is not subject to regulatory standards." (Kuczera and Field, 2018: p 15). There are many calls for better regulation (ETF, 2013: p 43; House of Commons, 2018a: pp 8, 12), including enforcement of the requirement that 20 per cent of apprentices' time should be devoted to off-the-job training (Field, 2018: p 19).

The transition from apprenticeship frameworks to apprenticeship standards has resulted in several quality issues, including a lack of available standards, which is affecting the recruitment of apprentices and leading to uncertainty about success criteria (House of Commons, 2018b: p15). There is unresolved tension about the policy focus on degree-level apprenticeships: while over 40 per cent of standards are for higher- and degree-level apprenticeships, most current apprentices work at levels 2 and 3, with only 11 per cent at level 4+⁷. Some popular programmes, such as business administration, have no replacement apprenticeship standard at level 2 and there are fears that the access barriers for those most suited to a vocational course will increase (Doel, 2019). There are also ongoing tensions regarding the length of time taken on some apprenticeship programmes: "English apprenticeships are typically much shorter than in many other countries, with an average of less than 18 months, compared with three to four years in some other countries" (Kuczera and Field, 2018: p 12).

⁷ See Ofsted blog by C. Jones of HMI: <https://educationinspection.blog.gov.uk/2019/01/08/chris-jones-hmi-specialist-adviser-for-apprenticeships-on-ofsteds-new-provider-monitoring-visits>

Measurement of ‘training quality’

a) Certification

The commonest quantitative indicator of training quality is the extent to which the training is ‘certified’. While this indicator could mean the receipt of some internal certificate, the better guarantee of quality is from an externally recognised qualification framework. Nevertheless, even a nationally recognised qualification is by no means perfect as a guarantor of quality. The quality of the training will depend on the qualification level; and, in the presence of grade inflation or poorly constructed qualification frameworks, the link between qualifications and skills can be loose.

Up to 2010, the QLFS asked respondents whether the training they had received in the previous four weeks led to a qualification, or a credit towards a qualification. Between 2005 and 2010 the proportion of training that was certified hovered in the range 44–47 per cent, with no significant time trend. After 2010, however, the QLFS ceased asking this question, so we are not able to update this series.

We are, however, able to use three other sources of data—SES, UKHLS and ESS – to examine whether there have been any substantive changes in recent years in the extent to which job-related training is certified.

In all waves of the SES from 2006 onwards, respondents who report that they had received some training over the previous year are asked whether their most recent episode of training led to a qualification or, if not, a credit towards a qualification. If either response is in the affirmative, we categorise the training episode as ‘certified’. In the UKHLS, trainees provide information about whether the training courses or schemes they attend lead to qualifications or credits towards a qualification: in the ESS, employer respondents are asked to report how many (if any) of their employees that receive training are getting training that leads to a nationally recognised qualification.

b) Trainees’ reported experiences and outcomes of training

An alternative way of measuring training quality is via the reports of the trainees. Since 2006, the workers responding to the SES have reported their perceptions of their training. The principle is the same as when feedback is obtained from participants at the end of a typical training course: the participants themselves are in a good position to self-evaluate what has changed. The difference is that, here, we are examining the training experiences of a large sample. Of course, the respondents may not judge their experiences well, and (as with giving feedback on individual training courses) unknown biases could be induced. Nevertheless, if such biases can be assumed to be relatively stable over time, any trends found in nationally representative data can be regarded as informative of genuine trends in training quality.

Such reports can cover the training itself, or the perceived outcome. Concerning their most recent training episode, SES asks respondents directly: ‘Would you say that this training or education has improved your skills ...?’ and they can respond ‘a lot’, ‘a little’, or ‘not at all’. For the purposes of our analysis, we took as our measure of quality whether the training was reported to increase skills ‘a lot’.

Respondents are then asked a series of questions as to where the newly acquired skills can be applied: in the current job, in another job in the same industry or service, or in another job in a quite different industry or service. From the responses, we are able to establish whether the training is firm-specific, industry-specific or transferable. Training to acquire any transferable skills (whether a lot or a little) can be taken as an indicator of quality because the skills are more likely to be utilised when there is labour mobility; transferable training is also more likely than firm-specific training to be associated with a potential pay increase, precisely because the new skills are valuable for other employers.

Table 9: Days participated in each of several training activities

	2006	2012	2017	England [†]	Scotland [†]	Wales [†]
Training is certified	32.3	33.2	31.7	32.6	26.2	40.4
Skills improved a lot	41.0	41.6	40.8	40.8	43.3	44.7
Any increase in transferable skills	86.8	85.9	87.5	86.7	86.9	86.3
Improved way of working	86.3	85.7	84.2	85.1	83	84
Better enjoyment from job	59.6	57	57.4	57	59.8	56.7
Given better job within organisation*	17.7	14.5	18.9	16.7	16	16.5
Given pay rise*	18.1	14	15.8	14.9	14.5	13.9
Improved job security	45.7	42.3	49.2	46.1	41	43.7
Index of Training Quality	48.4	46.8	48.2	47.5	48.7	46.2

Source: SES.

Notes: Base is all aged 20–65 in Britain (excluding Northern Ireland and Highlands and Islands) in work and in receipt of training; * employees only; † pooled data from all waves. The first three indicators above the line refer to the respondent’s most recent episode of training; the remaining indicators refer to training received by the respondent over the previous 12 months. For the meaning of each indicator, see text.

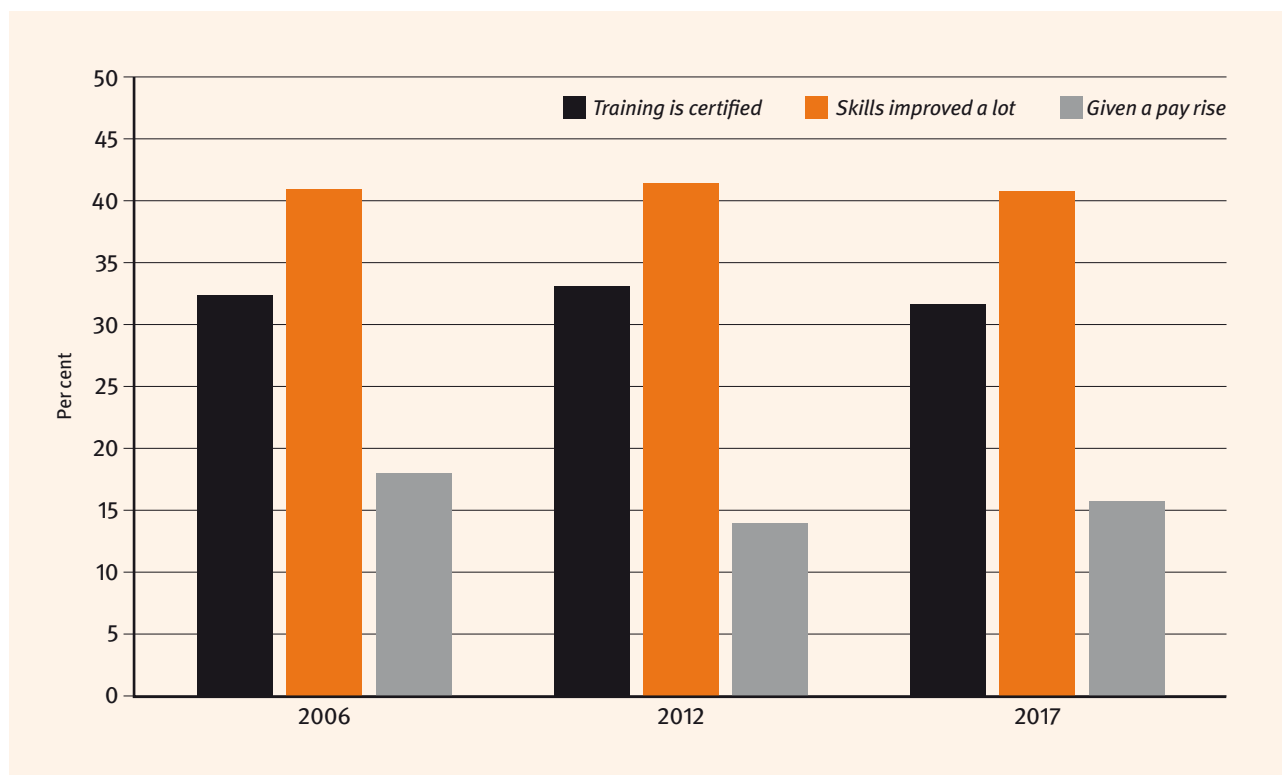
Further questions are asked about the totality of all the training that respondents had received in the course of the previous year. The first adds to the focus on the extent to which the training raises workers’ skills: respondents are asked whether the training ‘helped me improve the way I work in my job’. Then other questions measure respondents’ perceptions of the outcome of the training: whether the training ‘made me enjoy my job more’, whether ‘I was given a better job within the organisation because of the training’, whether ‘I received a pay increase as a result of my training’, and ‘whether I feel that my job is more secure in my organisation because of my training’. These reported perceptions are not the same as objective measures of training outcomes, which are normally unavailable as they require rare

experimental conditions or data that could identify the outcomes for both those going through the training and a similar control group who do not receive training. Nevertheless, the trends in workers’ perceptions of training outcomes are informative.

Altogether, the SES provides 10 indicators of training quality, each picking up different aspects of this concept. Their values are shown in Table 8. To provide an overall perspective, we have also combined them into one index, termed Training Quality, which has been rescaled from 0 (lowest quality) to 100 (highest).⁸ This index has a mean of 47.9 and a standard deviation of 24.5.

⁸ The index, which measures training quality among employees only, has an alpha score of 0.70; this suggests that each of the components may plausibly be viewed as capturing in an acceptable way the different facets of the underlying quality of the training that workers receive.

Figure 5: Three indicators of training quality for 2006, 2012 and 2017



Source: SES. Notes: see Table 9.

c) The content of training

A third way of evaluating the quality of the training is through information on its content. A distinction is commonly made between induction and ongoing training, with the former being brief, firm-specific training for new recruits, and the latter potentially delivering ongoing upskilling. Similarly, training for compliance with health and safety regulation, while necessary, can be distinguished from the upgrading or expansion of occupational and technical skills.

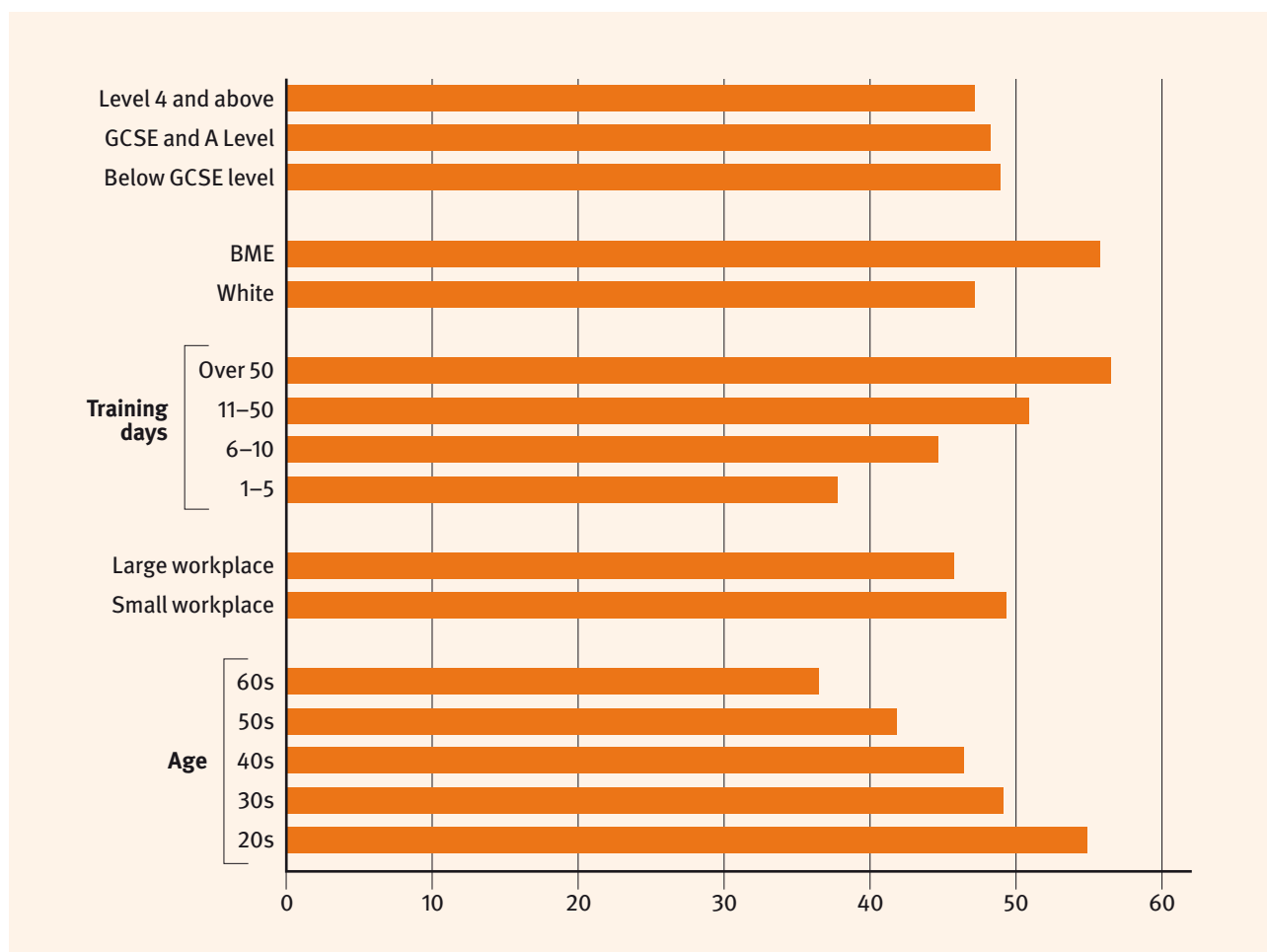
In the UKHLS, respondents identify the proportion of training that leads to skills upgrading or prepares them for a possible future job. Similarly, in the ESS, responding managers were asked to categorise the types of training received by their employees, enabling

analysts to delineate the proportion of training that was, at least partially, for the purposes of upskilling.

Findings from the Skills and Employment Survey

Several indicators of training quality are shown in Table 9, and three examples are illustrated in Figure 5. There is little or no trend in the proportion of training that is certified: in all waves, just under a third of workers' recent training spells is reported as leading to a certificate or qualification. Both in 2006 and in 2017 some 41 per cent of workers reported that their skills were improved a lot by their most recent spell of training. Meanwhile, some 50 per cent reported a small increase in their skills, and 9 per

Figure 6: Training Quality Index by education level, ethnicity, training volume, size of workplace and age



Source: SES

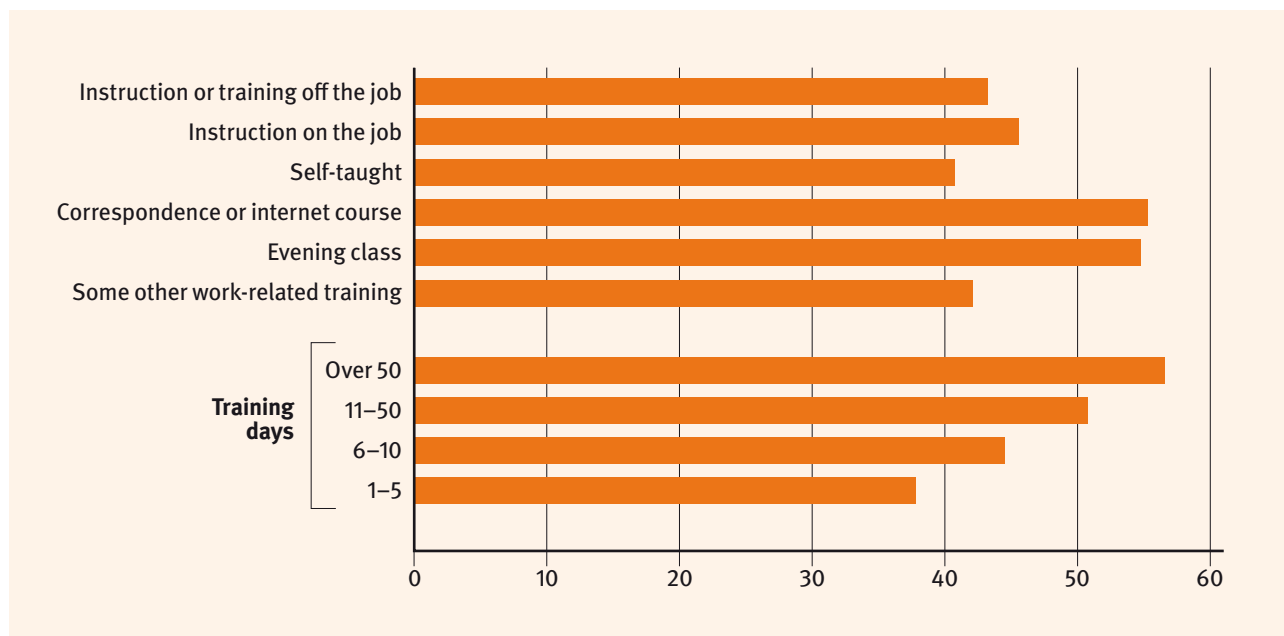
cent none, with virtually no change between 2006 and 2017. On this most direct measure, then, there is no change in the perceived quality of the recent spell of training. There is also no trend, though some less stability, in the proportion of employees who claimed that their training had led to a pay rise.

Some 58 per cent of certified training spells lead to a lot of skills improvement, as compared with just 32 per cent of non-certified training. Thus certification of training is, as expected, a partial sign that

perceived skills are increasing. Certification is also associated with training being more transferable: thus, 93 per cent of certified training is perceived to lead to some transferable skill improvements, as opposed to 83 per cent of non-certified training.

Little or no trend is also the outcome for the other, indirect quality indicators shown in Table 8. For example, the proportion of trainees who report that the training led to an improved way of working was 86 per cent in 2006 and 84 per cent in 2017.

Figure 7: Training Quality Index by type of training^a and number of training days^b



Source: SES. Notes: a. For each type, the index refers to those who do only that type of training; b. Number of days that some training took place.

There is also little change over this period in the overall training quality indicator, Training Quality.

Table 8 also shows that training in Wales is notably more likely to be certified than in either England or Scotland; a perceived skill increase is also somewhat more widely reported in Wales than in England (though not in comparison with Scotland). All other indicators, however, show no tendency for the quality of training to be higher in Wales than in either England or Scotland.

Figure 6 illustrates several factors that are related to training quality. First, it can be seen that there is a substantial difference in training quality according to age, with older age groups experiencing distinctly lower quality. The difference between those in their twenties and those in their sixties is 18 index points, more than two-thirds of a standard deviation. This age-related pattern follows along similar lines to training participation, which tends to be

lower among older workers, consistent with what one would expect from the life course theory: the investment in training is normally held to be of greater benefit for younger workers, for whom the pay-off is expected to last for longer before retirement.

Second, there is a notable gap in training quality between small and large workplaces, with those in establishments of 100 or more workers receiving training of lower quality by about four index points. This pattern contrasts strikingly with the relationship normally found for training participation, namely that participation is lower in small workplaces. One reason typically given for this pattern of participation is that training costs (including the opportunity costs of lost productive time) are expected to be lower in large workplaces; yet these lower costs do not seem to be yielding better quality.

Third, the quality of training varies significantly according to ethnicity, with the index for black,

Asian and ethnic minorities (BME) taken together some eight points higher than for whites.

Fourth, there are only small differences in training quality for those with various levels of prior education. This pattern for training quality is in contrast to how training participation and volume varies across education levels. Training participation is typically found to be considerably higher for those with more prior education; similarly, as Table 6 shows, training volume is four times higher for the higher educated as compared with the low educated. Yet, for those who do receive training, training quality is, if anything, slightly higher for the low educated.

Other factors that, as stated earlier, are typically found to be linked to training volume, were also examined: gender, union recognition and sector. These are not shown in the diagram, but it can also be noted that there are only small or insignificant differences between the quality of training received by women and by men, between those in union and in non-union jobs, or between the private and the public sector.

Figure 7 shows which forms of training tend to be of a higher quality. For this analysis, we looked at those who performed only one type of training. The type of training with the highest quality is the online or internet course, such as an Open University course: these had an average quality index score of 56, and were followed closely by job-related training at evening classes, which score 55. However, relatively few training episodes (just 3 per cent) came into either of these categories. By contrast, teaching oneself from a manual/book/video/computer or the internet is training of the lowest quality, with a score of just 41.

Finally, Figure 7 also shows that training quality is higher the more working days are involved during the course of a year. For example, there is a 13-point quality gap between those who receive some training on 11 to 50 days and those who receive training on 1 to 5 days in the year. This gap is accounted for by the straightforward propositions that the duration will be longer, other things being equal, when

more days involve some time spent training; and that there are more opportunities for skills to be increased when the training lasts longer. Despite this relationship, regression analysis reveals that controlling for the fall in the number of training days between 2006 and 2017, as well as for age, gender and ethnicity, does not alter the fact that the average quality of training is unchanged over the period.

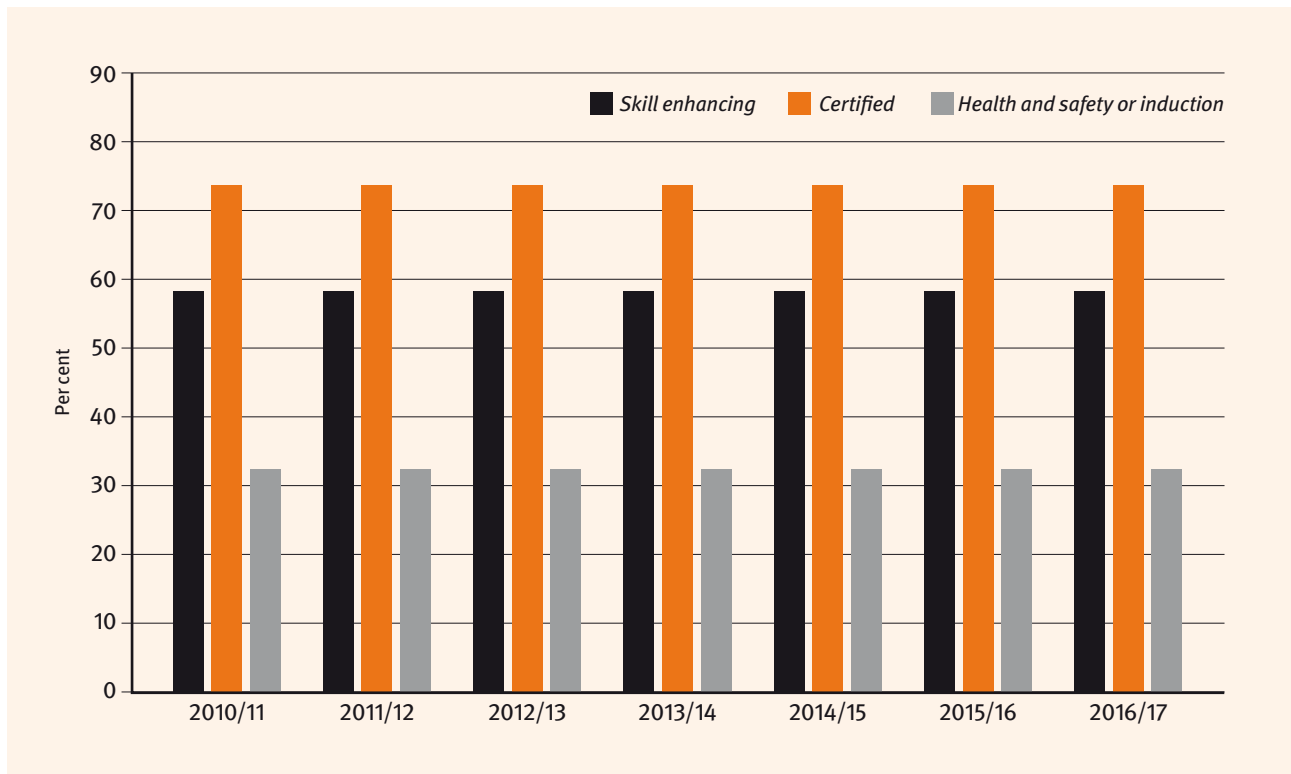
Findings from the UK Household Longitudinal Study

The annual formal training reported by respondents to the UKHLS is more likely to be certified than the recent spells of (all types of) training referred to by respondents to the SES data. Close to 60 per cent of training spells led to either some formal qualification or credits toward a formal qualification (see Figure 8). As with the SES, however, there is no systematic trend. There is just a little variation from one year to the next, implying no change in the quality of training as far as this indicator is concerned.

When questioned about the use to which their training hours were spent, nearly eight in ten, in most years, indicated that their training was spent on enhancing their skills – improving their skills or preparing them for a future job; there was only a little variation over time, with later proportions a little lower. However, the percentage of the training exclusively devoted to health and safety or induction has edged up from around 8 per cent to 13 per cent.

The percentage of training that is exclusively for induction or health and safety decreases with qualification level and skill level of the job – see Table 10. Training quality also clearly differs by age; this correlation mirrors the earlier finding from the SES. Whereas among 20- to 29-year-olds, 80 per cent of training hours were skill-enhancing and 61 per cent certified, only about 1 in 2 training hours among 60- to 65-year-old workers had the purpose of enhancing skills and only 39 per cent lead to a qualification. By

Figure 8: Breakdown of training quality in the UK workforce, 2010–17



Source: UKHLS. See Table 5.

contrast, any differences in these metrics of training quality by other workplace characteristics such as establishment size and unionisation are negligible.

Findings from the Employer Skills Survey

A somewhat different trend picture emerges, however, from the employer’s perspective, using data from the ESS (see Figure 9). Here it can be seen that the proportion of training to a recognised qualification is much lower than the training referred to in the surveys of workers. The figure is lower in part because it refers only to the training that employers fund, which includes all the on-the-job training, but not any training that individuals and/

or the government are funding. Also, while some of the training might be certified in the employees’ perspective through the employers themselves, these would not always be nationally recognised.

The most striking finding from the diagram is that the proportion of nationally certified training fell from 22 per cent to 18 per cent over the six-year period. In the same period, there was a steady rise, from 7 per cent to 12 per cent, in the proportion of training that was exclusively for health and safety or for induction of new workers – leaving a declining (though still high) proportion of training intended for the upskilling of existing workers. These figures suggest a modest decline in training quality over the period.

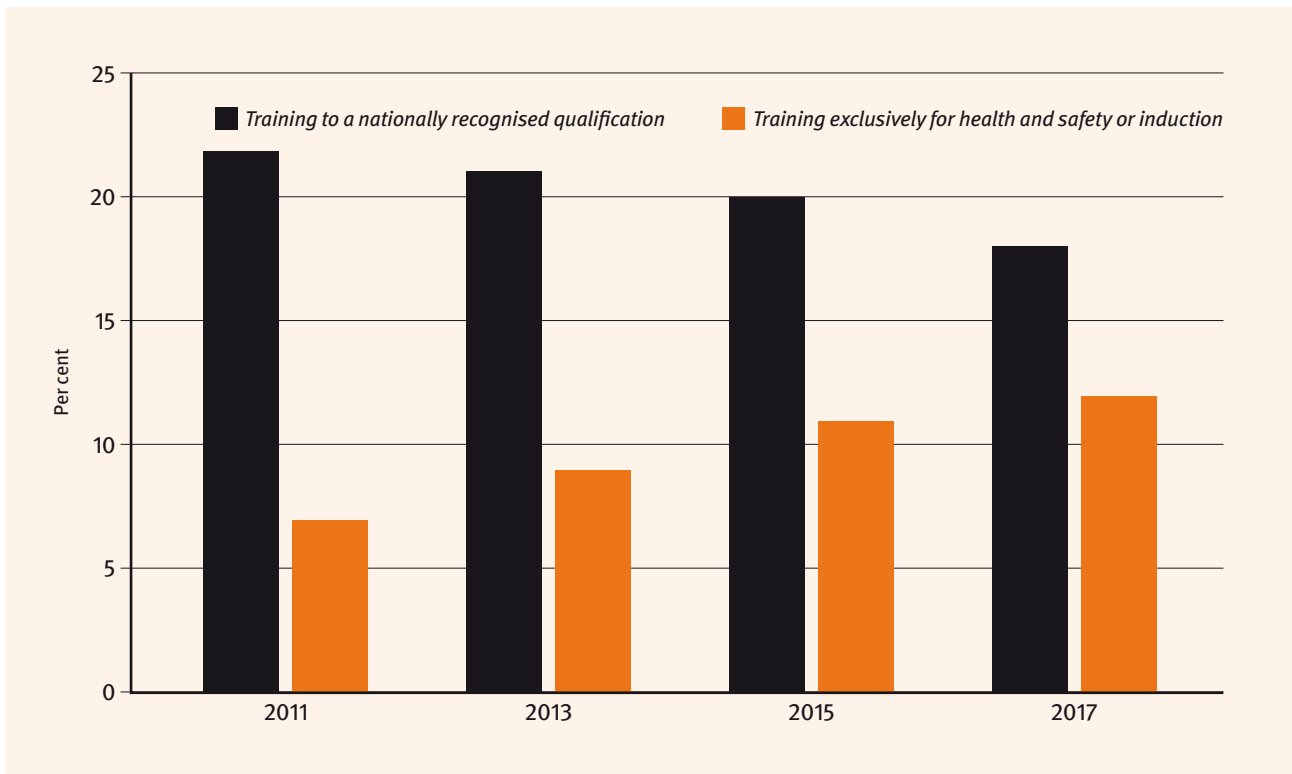
Table 10: Training quality broken down by individual and workplace characteristics

	Characteristics	Skill enhancing (%)	Certified (%)	Health and safety or induction (%)
Education	Higher qualification	76.3	54.2	6.3
	Mid-level qualification	76.0	59.5	10.9
	Low qualification	73.3	54.0	12.3
Occupation	High-skill	75.7	51.3	5.9
	Intermediate	78.2	59.9	10.5
	Services	75.7	58.7	11.5
	Labour	70.7	65.8	14.3
Ethnicity	BME	77.4	55.9	8.2
	White	75.6	55.5	8.6
Age	20–29	80.1	61.0	11.1
	30–39	79.5	57.3	7.4
	40–49	73.8	53.2	7.8
	50–59	70.4	50.6	7.2
	60–65	51.9	39.1	9.3
Workplace size	Small (<50)	75.6	57.9	9.3
	Medium (50–199)	76.9	57.7	8.2
	Large (≥200)	76.6	52.1	8.3
Union representation^a	No	74.7	59.0	9.1
	Yes	74.7	56.3	8.8

Source: UKHLS. See Table 5.

Notes: Percentage of total training volume in skill enhancing, certified and health and safety or induction spells; see footnote to Figure 7. a. employees only. Occupation groups the first three major groups into 'high-skill', major groups 4 and 5 into 'intermediate', 6 and 7 into 'services' and 8 and 9 into 'labour'.

Figure 9: Characteristics of employer training, 2011–17



Source: ESS; Winterbotham *et al.* (2018).

4. Conclusions

While in-depth studies can reveal the character of the training in particular courses or places of work, and how it succeeds or fails in expanding workers' skills, training quality is traditionally difficult to quantify. Nevertheless, workers' own reports of the training they have received, as gleaned from nationally representative surveys, give us a general, subjective picture of the average training quality of a nation or region. While there are likely to be some subjective biases in these reports, the trainees are themselves often the informants closest at hand; typically, this is how most individual training courses are evaluated – by the students. Comparisons can be made over time, if it is assumed that any unknown biases are constant, or change only a little.

The synthesis of evidence from the three surveys has revealed interesting and partly surprising patterns in training quality among different groups. Training quality is distinctly lower for older workers than for the young and, according to one survey, higher for BME workers than for white workers. While training for the low educated is a little more likely to be aimed at health and safety, on other measures it is as high quality as the training received by more educated workers.

Given the finding of declining volumes, then, one might expect to see a fall in the reported quality of training. This is what is found for the two measures reported by employers in the ESS. The proportion of training that is certified to nationally recognised qualifications is falling; and the proportion of training that is exclusively for induction or for health and safety (usually driven by regulation) is on the rise, meaning that the extent to which training is broadening or deepening occupational skills is receding. Reports from individuals in either the SES (from 2006) or UKHLS (from 2010), however, indicate little change in either the proportion of training that is certified, or other self-reported measures of training quality: for example, the proportion of training that is held to develop skills 'a lot' has remained steady at 41 per cent. The surveys refer to slightly different intervals, and this might be the source of difference;

but the evidence overall is unclear about whether there has been a distinct trend in training quality. The safest conclusion is that, if there has been a change over time in training quality, that change has been downward but has not been substantial.

What implications are there for the trend in job-related training's overall contribution to skill upgrading? Taking the evidence in the round, the fact that there is no sign of a substantive improvement in training quality reaffirms the pessimistic picture of training trends that has emerged from this report's analysis. With the long-term decline in training volume not being clearly counterbalanced by unambiguous increases in its quality, policy-makers, employers and unions cannot afford to remain sanguine about the prospects for raising and deepening future workforce skills and therefore living standards in this uncertain age. In the coming years, it will be important for government to monitor closely the volume and quality of training. Significant reforms may be needed to reverse the apparently embedded decline in training volumes.

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