



Skills at Work in Britain

First Findings from the Skills and Employment Survey, 2012

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HEADLINES

Large investments of time and money are made by government, employers and workers in education and training. For the economy to thrive, the best use needs to be made of the skills produced. This report provides new evidence on whether employers in Britain are doing so and whether jobs are being upskilled.

- Qualification requirements of jobs have risen over the last quarter of a century. By 2012 jobs requiring degrees on entry reached an all time high, while jobs requiring no qualifications fell to historically low levels.
- Yet, overall the evidence for continued upskilling is mixed, because there has also been a shortening of training and learning times for jobs – a reversal of trends previously recorded. The importance of computing skills at work continued to grow, albeit less rapidly than in the past, but the rise in most other generic skills came to a halt.
- For the two decades from 1986 to 2006 the prevalence of over-qualification had been rising, but it fell between 2006 and 2012. Although mismatches remain quite high, this turnaround may signal more effective use of qualifications at work by employers.

The Skills and Employment Survey is funded jointly by the Economic and Social Research Council and the UK Commission for Employment and Skills through the ESRC Centre for Learning and Life Chances in Knowledge Economies and Societies (LLAKES) which acts as the host institution. It is directed by Alan Felstead (Cardiff University and Visiting Professor at the Institute of Education) in collaboration with Duncan Gallie at the University of Oxford and Francis Green at the Institute of Education.

1. The Importance of Skills at Work

Governments, employers and individuals devote large amounts of money and time to education and training. As a result, the stock of well-educated people in the workforce has been increasing rapidly in recent decades. It has been shown that education and training lead to beneficial social outcomes such as reduced crime, lower anti-social behaviour and better health and well-being. Yet a central expectation is that education and training will raise skills and so enhance economic performance.

This enhancement depends on whether employers utilise the raised skills. By engaging in skilled work that matches their potential, workers are able to fulfil themselves and meet a basic human need, while enabling businesses to thrive. Yet it is not always possible for people to find employment that effectively uses the skills and educational qualifications they have. The pace of educational expansion may not be closely matched to the increasing demand from employers, and search processes by employers and employees are often imperfect. So there is considerable interest in minimising the mismatch between the skills stock and job skills. To help form relevant policies we need to track the scale of the problem and to monitor how job skills have changed over time.

2. Previous Evidence

Despite large educational expansion the monetary benefits of education have remained high (although they have become more variable in recent years), indicating a parallel expansion of demand for skills. Previous Skills Surveys show that skill requirements in Britain rose from 1986 to 2006. The proportion of jobs requiring graduate qualifications in Britain doubled from 10% to 20% and jobs requiring no qualifications fell from 38% to 28%. The amount of learning time required to do the job well, and the cumulative amount of training, each moved in a similar upward direction. Furthermore, the importance of generic job tasks rose between 1992 and 2006. Nevertheless, earlier findings suggested that the mismatch between qualification demand and supply was widening.

Based, in part on this evidence, the UK Commission for Employment and Skills urged government 'to invest as much effort on raising employer ambition, on stimulating demand, as it does on enhancing skills supply'.

3. The Skills and Employment Survey 2012: A Source of New Evidence

The Skills and Employment Survey 2012 (SES2012) provides an opportunity to assess what progress has been made towards achieving the goal of raising skills utilisation. The survey collected responses from working adults in England, Scotland and Wales, interviewed in their own homes. The sample was drawn using random probability principles subject to stratification based

on a number of socio-economic indicators. Only one eligible respondent per address was randomly selected for interview, and 49% of those selected completed the survey. Data collection was directed by ourselves and conducted by GfK NOP.

SES2012 is the sixth in a series of nationally representative sample surveys of individuals in employment aged 20-60 years old (although the 2006 and 2012 surveys additionally sampled those aged 61-65). The numbers of respondents were: 4,047 in the 1986 survey; 3,855 in 1992; 2,467 in 1997; 4,470 in 2001; 7,787 in 2006; and 3,200 in 2012. For each survey, weights were computed to take into account the differential probabilities of sample selection, the over-sampling of certain areas and some small response rate variations between groups (defined by sex, age and occupation). All of the analyses that follow use these weights.

4. Concepts and Variables

The use of skills is captured by the concept 'job skills' which refer to the abilities workers require to carry out their current job competently; these can be categorised further as 'broad skills' (an overall average of job requirements) and 'generic skills' (certain skills which are used across a wide range of settings).

Three indicators for broad skills are obtained from the putative inputs needed: education, prior training, and initial post-entry learning. For the first, respondents were asked: 'If they were applying today, what qualifications, if any, would someone need to get the type of job you have now?' Here, we focus on the proportions who reported that job entry would require at least a degree and those who said that no qualifications would be needed. We also present data on 'over-qualification'; that is, workers who had a qualification higher than the level required for entry.

The second broad skills indicator, prior training, comes from the question: 'Since completing full-time education, have you ever had, or are you currently undertaking, training for the type of work that you currently do?' If 'yes', 'How long, in total, did (or will) that training last?' Seven responses were possible ranging from no prior training (scoring '0') needed at one end of the spectrum to over two years (scoring '6') at the other. The training time index refers to an average of these scores.

The third broad skills indicator, initial post-entry learning, is based on the question: 'How long did it take for you after you first started doing this type of job to learn to do it well?' Six responses were possible ranging from 'less than a month' (scoring '1') to over 'two years' (scoring '6'). The learning time index refers to an average of these scores.

Previous surveys in the series pioneered the development of measures of generic skills at work. Respondents were asked: 'in your job, how

important is [a particular job activity]'. Examples of the activities included: 'using a computer'; 'analysing complex problems'; and 'adding, subtracting, multiplying or dividing numbers'. The 2012 questionnaire covered 44 activities. Factor analysis produced ten types of generic skills. For presentational purposes, we report the proportion of respondents who said that these skills were 'essential' to their jobs. Those using computers at work were asked whether they drew on either 'complex' or 'advanced' skills to do so (with anchored examples).

5. Findings

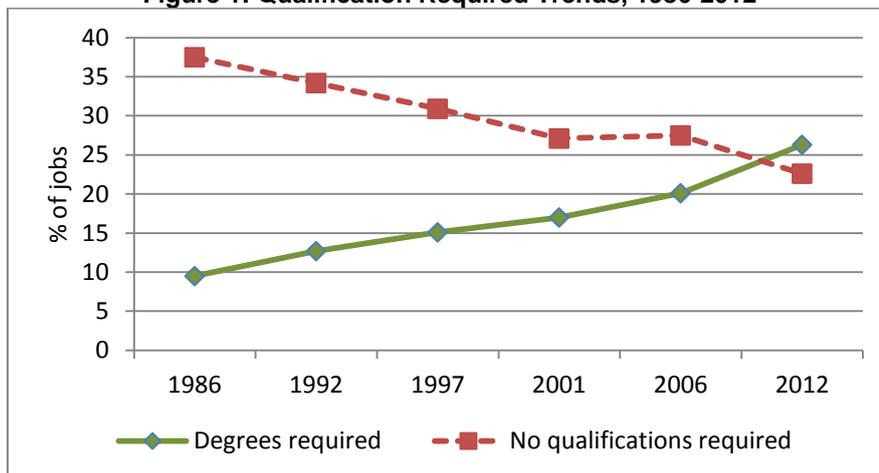
Qualification Requirements

The qualification requirements of jobs in Britain have moved upwards since 1986 (Figure 1). However, the upward movement became more pronounced between 2006 and 2012. Jobs requiring no qualifications on entry fell from 28% in 2006 to 23% in 2012, while jobs requiring degrees

or higher rose from a fifth (20%) in 2006 to around a quarter (26%) in 2012. At no time in the 1986-2012 period have falls and rises of these magnitudes been recorded. Meanwhile, the proportion of jobs requiring intermediate qualifications barely changed.

It could be objected that, even if jobs were unchanged, employers might raise their educational requirements 'on the rising tide' of educational expansion. If so, employers would increasingly require new recruits to have higher qualifications on entry than is necessary to do the job. However, there is no evidence of widespread or growing 'credentialism' taking place now or in the past. Three-quarters of respondents who reported new recruits would require a degree to get the job also said that a degree was 'essential' or 'fairly necessary' to do the job. This proportion has remained stable since 1986.

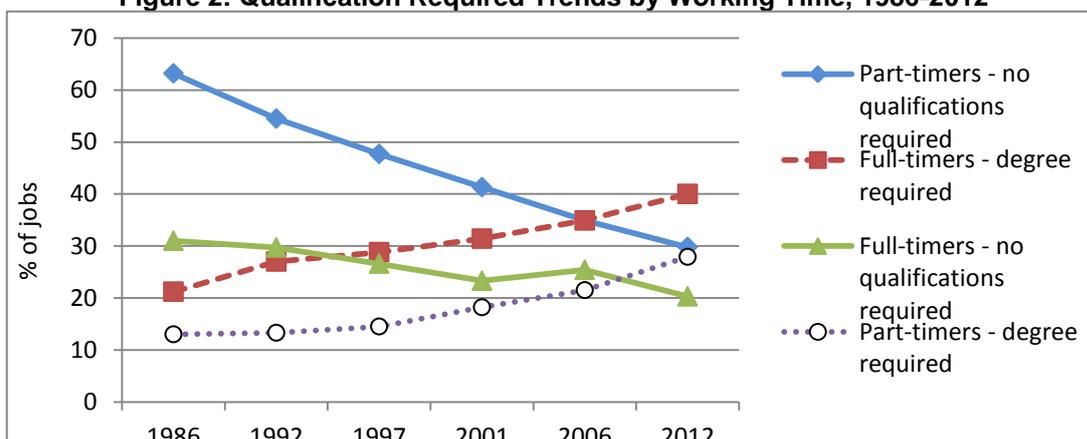
Figure 1: Qualification Required Trends, 1986-2012



The qualification requirements for part-time jobs have risen the most (Figure 2). In 1986 around two-thirds (63%) of part-time jobs required no qualifications on entry, but by 2012 this had fallen to less than a third (30%). Among full-timers the

fall was less dramatic, with the consequence that the percentage point gap between full-timers and part-timers shrank from 32 percentage points to ten.

Figure 2: Qualification Required Trends by Working Time, 1986-2012

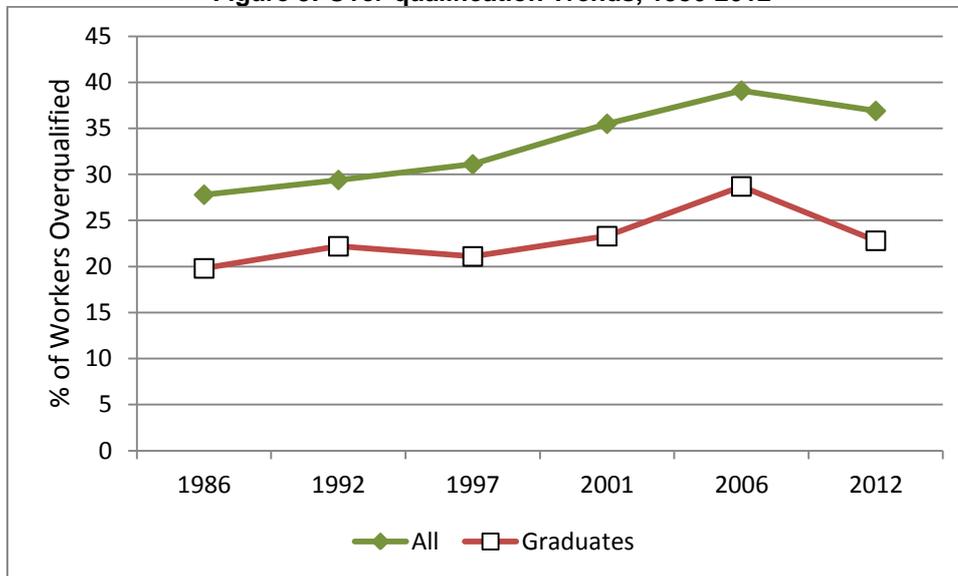


Over-qualification

The results of the survey suggest that between 2006 and 2012 the long trend of rising levels of over-qualification in Britain was put into reverse

(Figure 3). From 1986 to 2006, two or three percentage points were added at each data point to the proportion over-qualified. Yet over 2006-2012 the proportion fell by two percentage points, with an even sharper decline among graduates where it fell by six points.

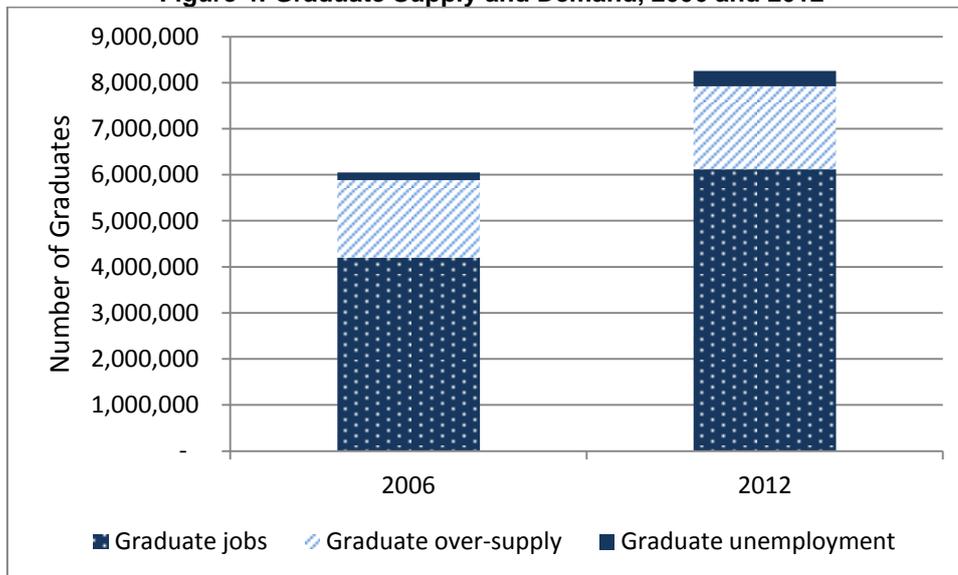
Figure 3: Over-qualification Trends, 1986-2012



Over-qualification is one manifestation of 'under-employment', which should be considered alongside unemployment. Between 2006 and 2012 the total number people with degrees – whether in or out of work – rose by 2.2 million, while the number of graduate jobs rose by 1.9 million (Figure

4). While the graduate over-qualification rate fell from 28% to 22%, the graduate unemployment rate rose from 3% to 4%. The net result is that the proportion of graduates who are matched in graduate jobs rose from 69% to 74%.

Figure 4: Graduate Supply and Demand, 2006 and 2012



This improved qualification matching suggests that employers are starting to use workers' qualifications more effectively than in the past. There is some support in the data for this suggestion. Thus, nearly nine out of ten respondents (87%) in 2012 thought that they had 'enough opportunity to use the knowledge and skills' that they had, up from 82% a decade earlier.

Training and Learning Times

It is also possible that qualifications requirements are increasingly being used as a substitute for prior training and initial post-entry learning. This possibility is consistent with the finding that there has been a decline in both training and learning times since 2006. From 1986 to 1997, there was

an upward trend in both measures, but from then onwards upskilling petered out and by 2012 there were noticeable falls in both (Table 1). This decline may reflect the fact that higher qualified workers need shorter training periods for the job and may be able to get to grips with the job more quickly than lesser qualified workers. Above average falls

in long training and learning times were recorded between 2006 and 2012 for jobs that required intermediate or above qualifications on entry. Although it should also be noted that jobs requiring low or no qualifications also saw training and learning times fall.

Table 1: Training and Learning Time Indices, 1986-2012

	<u>1986</u>	<u>1992</u>	<u>1997</u>	<u>2001</u>	<u>2006</u>	<u>2012</u>
Training Time Index	2.03	2.17	2.58	2.25	2.59	2.29
Learning Time Index (employees only)	3.32	3.36	3.54	3.54	3.59	3.41

Gender and Sector

Across all three broad skill measures women have caught up men and closed the gender gap almost completely for qualifications required on entry and the training time required for jobs. Only in terms of learning time does the gender gap still persist. It is these gender trends that lie behind the the closure of the full-time/part-time skills gap; two-fifths of women were working part-time in 2012 compared to around a tenth of men.

On all three broad skill measures, the gap between the public and private sectors has widened with relatively sluggish growth in skilled jobs taking place in the private sector. It is well-known that the public sector staff are, on average, higher qualified. What these results demonstrate is that this extends to skills used at work and is a tendency which has strengthened over time.

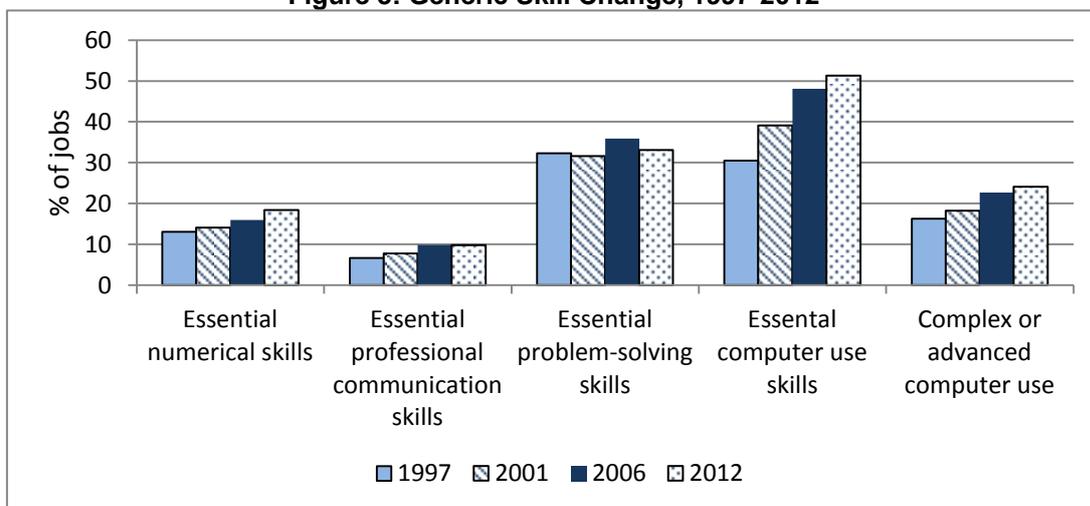
Generic Skills

The use of generic skills was on the rise between 1992 and 2006, but has barely changed since

2006. Among ten generic skills, the changes have been modest, with just two moving significantly upwards and one downwards.

Figure 5 illustrates the movement of four generic skills. Of these, numerical skills rose significantly between 2006 and 2012, problem-solving skills declined significantly and professional communication skills remained unchanged. Computer skills requirements continued to rise, but much more slowly than before. Around nine percentage points were added to the proportion of respondents regarding computing skills as 'essential' to their daily work activities at each data point between 1997 and 2006, but over 2006 to 2012 just over three percentage points were added. Jobs requiring sophisticated computer use also slowed down. There was a substantial upward movement in sophisticated computer use between 1997 and 2001 and then again between 2001 and 2006; subsequently, however, there was no statistically significant change.

Figure 5: Generic Skill Change, 1997-2012



6. Policy Implications

The good news is that, given the increased emphasis placed on increasing the qualification stock of the British workforce, these results offer policy-makers some reassurance. Calls for employers to raise their ambitions and make more effective use of qualifications are starting to be heeded. Qualification requirements for jobs have risen a lot since 2006, and more jobs are calling for degree-level qualifications. Levels of over-qualification have fallen for the first time since the data series began. Set against this, training and learning times have fallen and, while some of this decline might be explained as substitution by skill acquisition in education, generic skills growth has also virtually come to a halt.

Thus the issue for policy is that, while existing businesses are making better use of publicly supported education than in the past, the upskilling of jobs which has characterised the last twenty years is slowing down. Since the economy's prosperity is based on the skills of its jobs, it is on ensuring that this slowdown does not turn into a long-term reversal of the upskilling trends of the 1986-2006 period that policy-makers should concentrate most. More may need to be done to challenge some employers to ratchet up their skill demands. It is an oft-stated ambition for Britain to become a leader in its stock of skilled labour, but to make the most effective use of the skills produced policies to raise skills demand alongside supply are also required.

Selected Recent Studies

Felstead, A, Gallie, D, Green, F and Zhou, Y (2007) *Skills at Work in Britain, 1986 to 2006*, Oxford: ESRC Centre on Skills, Knowledge and Organisational Performance.

Gallie, D and Zhou, Y (2011) 'The changing job skills of female part-time workers in Britain 1992-2006', *Human Resource Management Journal*, 21(1): 28-44.

Green, F and Zhu Y (2010) 'Overqualification, job dissatisfaction, and increasing dispersion in the returns to graduate education', *Oxford Economic Papers*, 62: 740-763.

UKCES (2009) *Ambition 2020: World Class Skills and Jobs for the UK*, Wath-upon-Deane: UK Commission for Employment and Skills.

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All titles, along with technical reports, are downloadable free from **LLAKES** at <http://www.llakes.org/> and from the survey website at <http://www.cardiff.ac.uk/socsi/ses2012/> (1-3 after 24/4/13; 4-6 after 20/5/13).

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