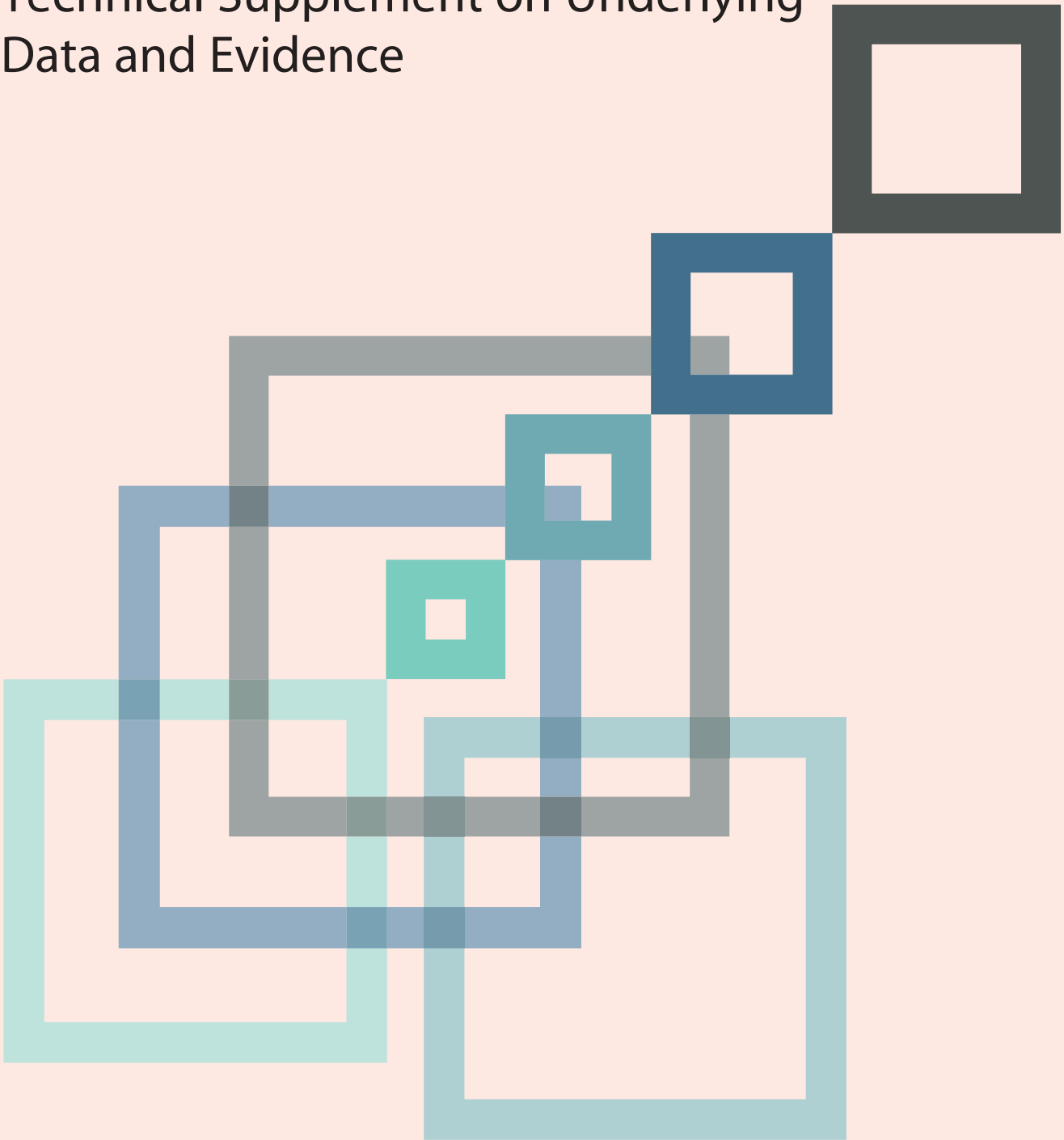
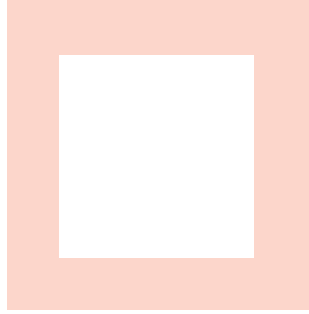


Skills Strategy

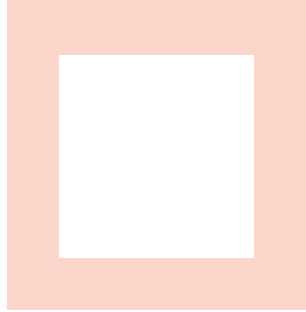
Technical Supplement on Underlying
Data and Evidence





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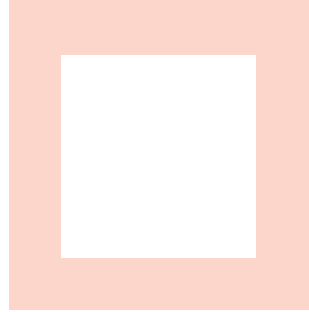


SECTION 1:

Introduction

- 1.1 This technical paper sets out recent trends in national productivity and the supply of, and demand for, skills and qualifications. It provides a background and context for assessing the progress made in implementing the Skills Strategy, as set out in the Skill Strategy Progress Report.¹ It focuses on:
- trends in national productivity and how that compares with other countries;
 - the main differences in productivity by region and sector;
 - recent and projected trends in the demand for skills; and
 - recent trends in skill supply, and evidence on whether supply and demand are in balance.

1 Skills Strategy Progress Report, Skills Alliance (2004)



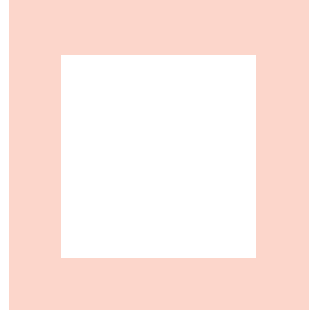
SECTION 2:

Summary

2.1 The key trends and evidence presented are:

- the UK remains behind key competitors in terms of labour productivity but, overall, progress is being made on closing the gap;
- there are large regional and sectoral differences in productivity;
- research and analysis has shown that relatively poor skills levels contribute to such gaps in a variety of ways, and that raising investment in skills and human capital can have a positive influence on productivity;
- skill demand is determined to a large extent by business product and service markets and the way businesses organise and operate their businesses;
- employers producing high specification products and services, those engaged in high levels of technological change, and those competing in global markets have higher demands for skill;
- future job growth will be concentrated in occupations requiring higher levels of skills and qualifications – managers, professionals and associate professionals – and in personal service occupations with a decline in employment in lower level manual and non-manual jobs;
- however, there will be large skill demands in all occupations to replace those leaving the labour market through normal demographic turnover;

- the UK working age population is ageing and it will not be possible to rely on the inflow of young people to meet future skill needs;
- qualification levels achieved by young people prior to entry to the labour market have increased significantly in recent years and this will help to meet future skill needs;
- there has been an increase in adult participation in learning and this is resulting in adults achieving higher qualification levels – steady progress is being made in achieving the basic skills and level 2 targets for adults;
- the UK has narrowed the gap with its international competitors in terms of the numbers qualified at levels 2 and 3 – particularly those holding general education qualifications;
- skill shortages – vacancies that exist due to a shortage of skills – are low by historical standards and are concentrated in skilled craft, associate professional and personal service jobs; and
- skill gaps – by which we mean deficiencies among current employees – are a much bigger problem and tend to relate to a lack of generic skills in jobs requiring a lower level of skills and qualifications, particularly in service sector jobs.



SECTION 3:

Trends in Productivity

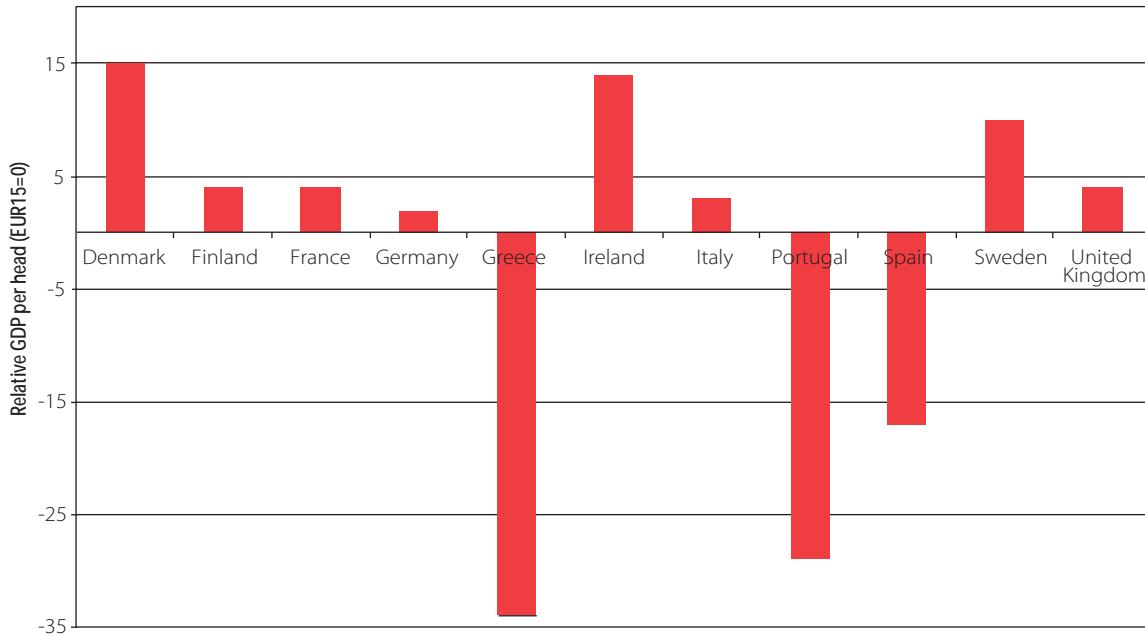
ASSESSING THE UK'S PRODUCTIVITY POSITION

- 3.1** For some decades, the UK has lagged behind its main trading partners in terms of labour productivity. In terms of *GDP per worker* the UK is broadly as productive as Germany, whilst France is 13% more productive than the UK, and the US is 27% more productive². On top of favourable employment rates, the UK's relatively long working hours and fewer holidays (compared to other EU countries) mean that on this measure of productivity the UK performance is better than on the measure of productivity per hour worked.
- 3.2** For example, OECD data for 2001 show that on average, workers in France and Germany respectively work 200 and 250 hours per year less than in the UK, while workers in the US work around 100 hours more per year. This has a large effect on the UK's relative productivity position. In terms of *GDP per hour worked*, workers in France are about one-third more productive per hour than UK workers. The US and Germany also remain significantly ahead of the UK on this measure (19% and 16% respectively).

² National Statistics International Comparisons of Productivity, February 2004, www.nationalstatistics.gov.uk/cgi/nugget.asp?id=160

3.3 In terms of output per head of population, the UK performs favourably in relation to key competitor economies across the EU. Chart 1 below shows GDP per head³ in relation to the EU15 average.

Chart 1: GDP per head relative to EU15 average

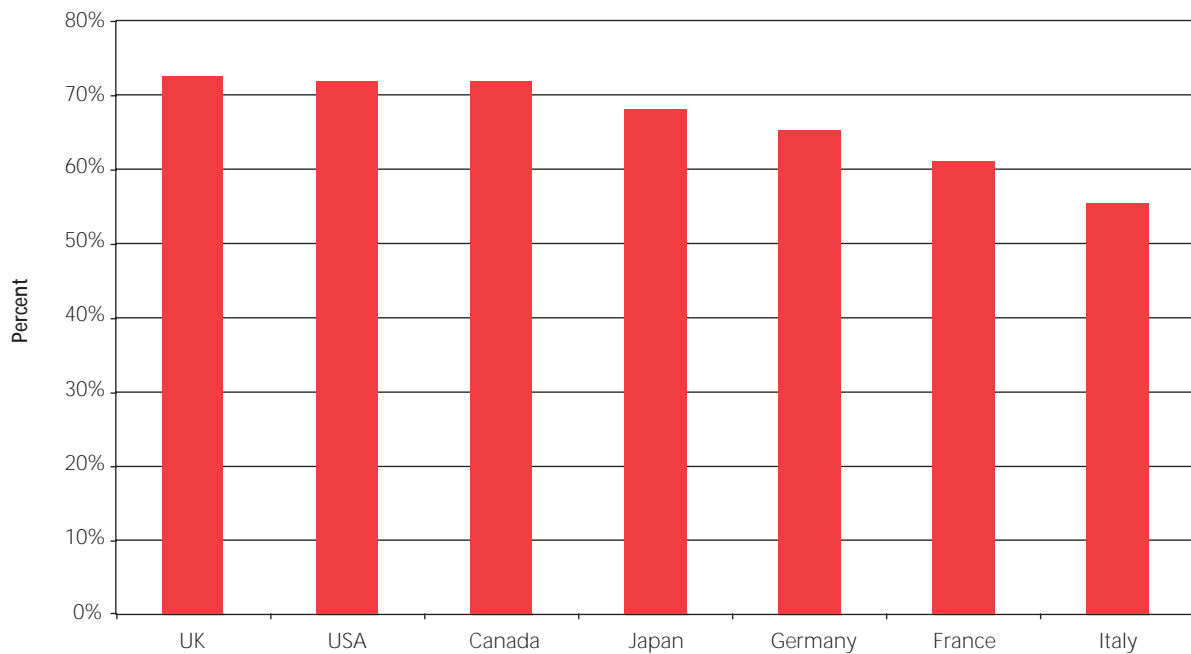


Source: ONS, *Economic Statistics: Regional Trends 38* (2000 data).

3.4 The UK is on a par with France and marginally ahead of Germany on this measure. This relatively favourable performance partly reflects the fact that the UK has a high proportion of its population in employment compared with some other nations, boosting aggregate output. Chart 2 shows international comparisons of the proportion of the adult population who are in employment (2002), demonstrating the UK’s relatively high success in securing employment for our population.

3 Gross Domestic Product (GDP) per head (Purchasing Power Standard): The Purchasing Power Standard (PPS) is a unit of measurement calculated by scaling Purchasing Power Parities (PPPs) so that the aggregate for the EU-15 as a whole is the same whether expressed in Euros (ECUs) or in PPS. Purchasing Power Parities are conversion factors, which make it possible to eliminate the combined effect of price level differences and other factors from a comparison of economic aggregates and thereby obtain a real volume comparison between countries. (www.nationalstatistics.gov.uk/STATBASE/ssdataset.asp?vlnk=7648&More=Y)

Chart 2: International comparison of adult employment rate (2002)



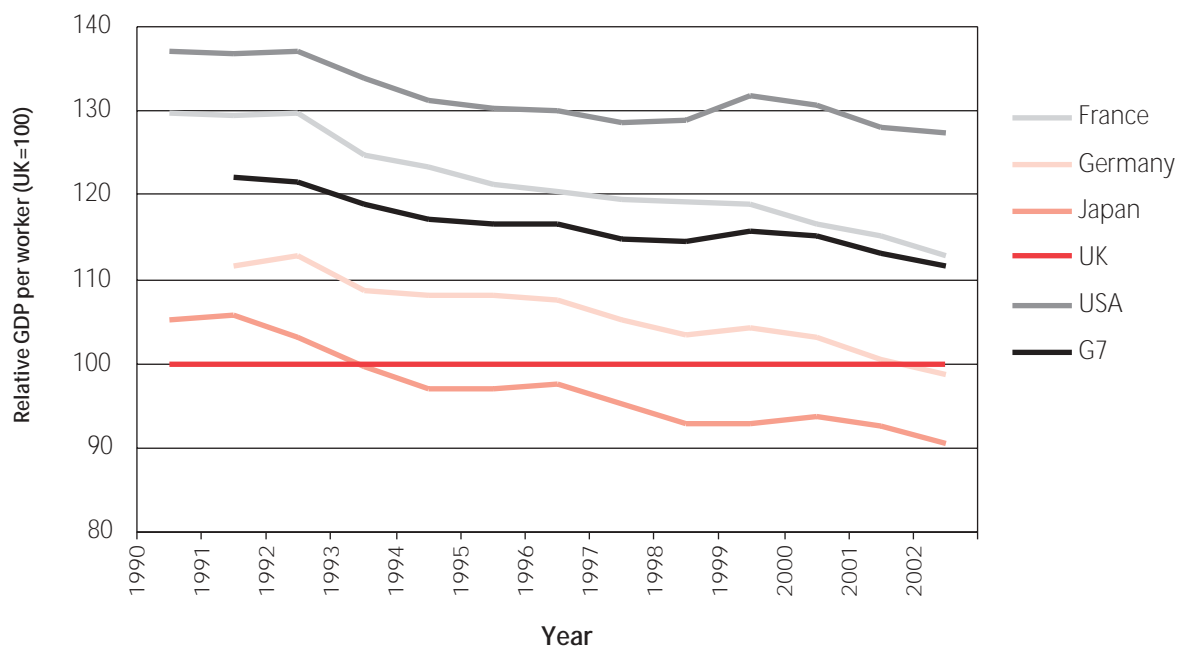
Source: OECD Employment Outlook: Towards more and better jobs

WHAT PROGRESS IS THE UK MAKING?

3.5 Overall, there are encouraging signs of progress over the past decade towards narrowing the gap with France and Germany on the per worker measure, and with Germany on the per hour worked measure.

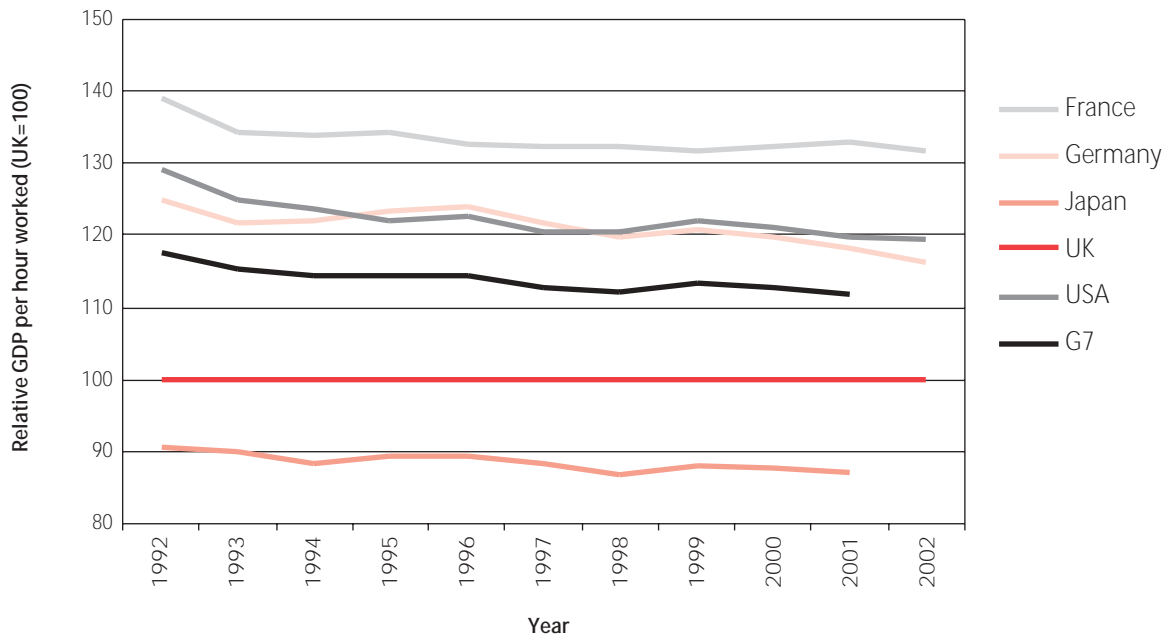
3.6 Charts 3 and 4 below show recent trends in relative productivity.

Chart 3: Relative GDP per worker 1990 – 2002



Source: Office for National Statistics (2003).

Chart 4: Relative GDP per hour worked 1992-2002

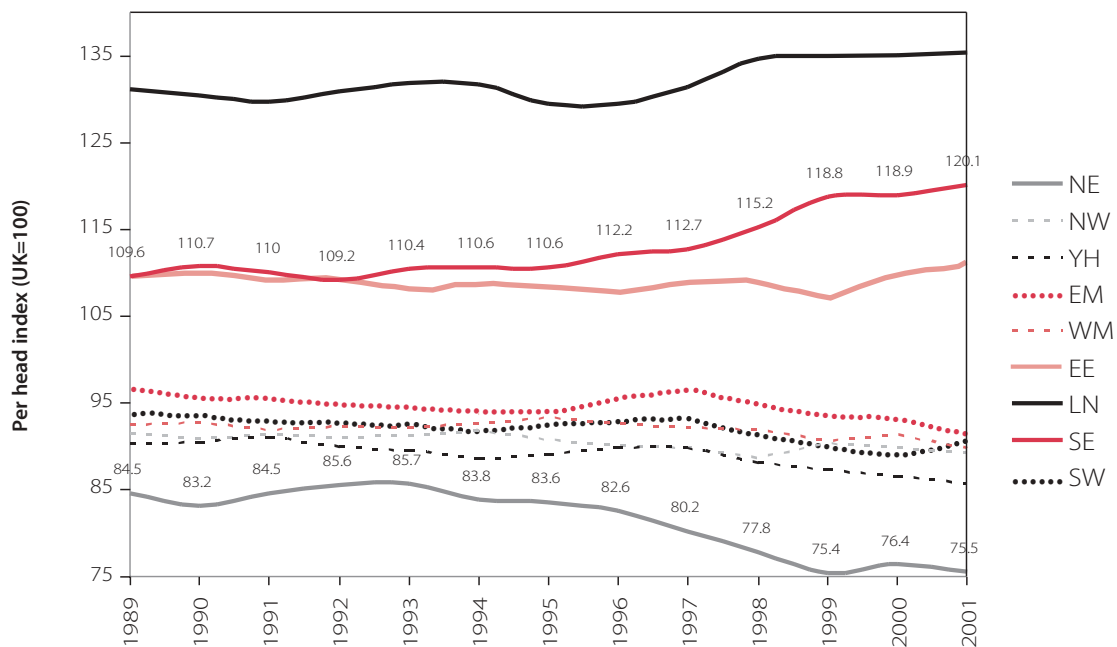


Source: Office for National Statistics (2003).

REGIONAL DIFFERENCES IN PRODUCTIVITY

3.7 Productivity is not uniform across the UK economy, but differs significantly between regions. Such comparisons are usually made using Gross Value Added (GVA)⁴. In terms of the English regions, the North East has the lowest *GVA per head* and the gap between the North East and the South East (and London) is growing. Chart 5 below shows the trend since 1989.

Chart 5: Regional GVA per head 1989-2001

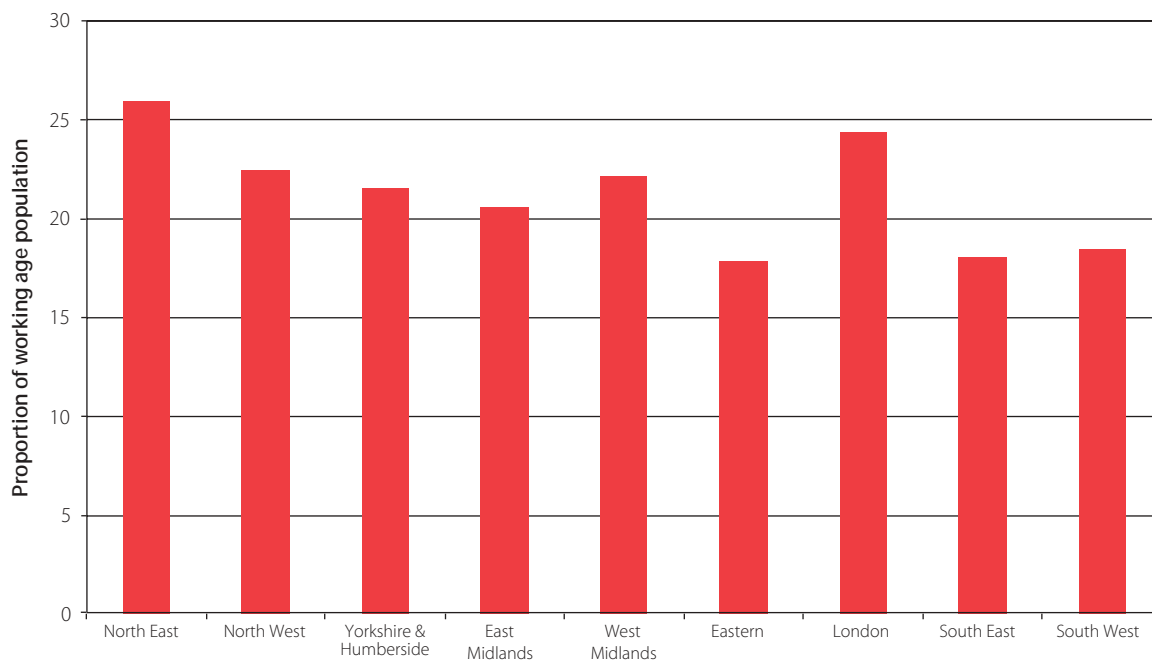


Source: *Regional Gross Value Added, ONS, 2003*

4 GVA + taxes on products - subsidies on products = GDP

3.8 The use of a “per head” measure for GVA means that these data do not take regional employment rates into account. For example, the employment rate in the North East is the lowest in England, and the economic inactivity rate is the highest. So the relative gap in terms of *labour* productivity will not be as marked as the per capita data suggest. Chart 6 shows the variation in economic inactivity rates by region.

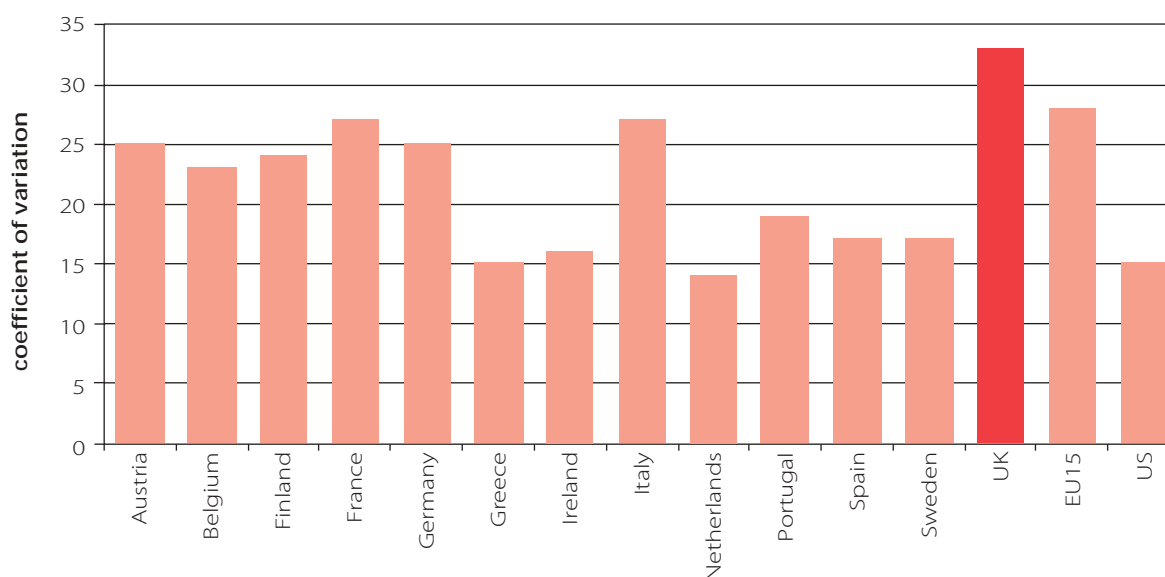
Chart 6: Economic inactivity rates by region



Source: LFS, Autumn 2003

- 3.9 Other indicators back up the North East’s relatively low productivity, including:
- the lowest average earnings in England (£402 per week compared to £505 in the South East and £637 in London)⁵; and
 - a poorly qualified population (the highest proportion of adults with qualifications below level 2 and the lowest proportion of adults with degree level qualifications).
- 3.10 In addition, large productivity differentials are evident at the sub-regional level, with variation in GDP per capita higher than any other EU country (see chart 7).

5 New Earnings Survey, 2003

Chart 7 – International comparisons of variation in sub-regional GDP per capita

Source: *Productivity in the UK: The Regional Dimension*¹ (HMT Nov 2001)

3.11 Further data on the regional distribution of productivity, the factors that contribute to it, and action in hand to address it, were set out in the reports of the Treasury's Devolved Decision Making Review, published with the March 2004 Budget.⁶

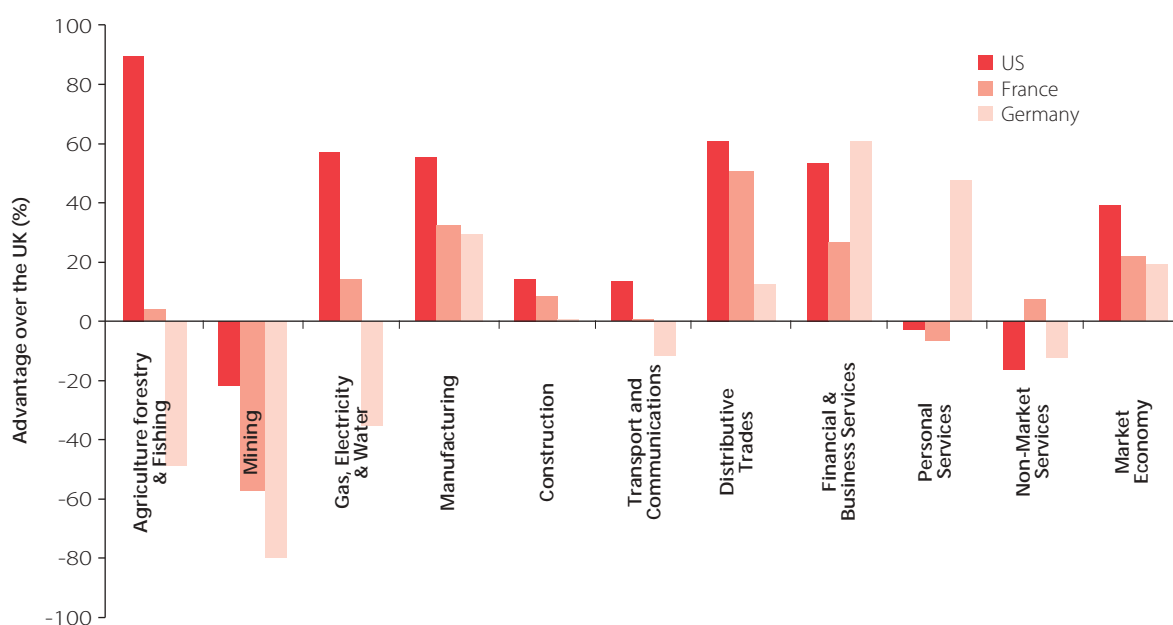
SECTORAL DIFFERENCES IN PRODUCTIVITY

3.12 There are also variations in productivity by sector. The regional and sectoral differences are linked, as the sectoral make-up of the economy varies between regions. Simply comparing output per worker across sectors is not very meaningful as some sectors will always have high values due to capital intensity, for example. It is informative to compare the relative productivity of sectors in the UK with the same sectors in competitor economies. Chart 8 below shows the relative GDP per hour worked of sectors in the UK compared to the USA, France and Germany⁷.

⁶ http://www.hm-treasury.gov.uk/budget/budget_04/associated_documents/bud_bud04_addevolved2.cfm

⁷ Based on Table 10 in *Britain's relative productivity performance: Updates to 1999*, O'Mahony and de Boer, NIESR, 2002

Chart 8: Relative output per hour worked by sector



Source: Based on Table 10 in *Britain's relative productivity performance: Updates to 1999*, O'Mahony and de Boer, NIESR, 2002

3.13 The chart illustrates that the productivity gap with each country is driven by different sectors. For example, a large share of Germany's advantage over the UK is driven by the 'Manufacturing', 'Personal Services' and 'Financial & Business Services' sectors. It also shows that the broad message from the international comparison data (that the UK is less productive than France, say) is not true across the board.

3.14 The significance of these sectoral differences in understanding national, regional and local productivity gaps underlines the importance of the new Sector Skills Councils in identifying causation and promoting action to tackle the gaps. A separate report on the Skills for Business Network is being published in parallel with this report. The Sector Skills Development Agency website at www.ssda.org.uk contains further data on sectoral productivity and skills trends.

ACCOUNTING FOR PRODUCTIVITY DIFFERENCES

3.15 Many factors contribute to differences in productivity at international, regional, sectoral and company level. Skill-level is one of them, and the body of evidence illustrating this is large.

3.16 Research has shown that, in terms of GDP per hour, 12% of the gap with France and one-fifth of the productivity gap with Germany is due to the UK's relatively low skills level⁸.

3.17 International "matched-plant" studies have also shown that, whilst other factors are important, lower levels of skills in the UK workforce lead to lower output per employee through:

- a lower proportion of workers being qualified specifically to do their current role;
- production bottlenecks where too few workers have the skills to do particular jobs;

⁸ *Britain's relative productivity performance: Updates to 1999*, O'Mahony and de Boer, NIESR, 2002

- more machine down-time;
- slower implementation of new technologies and production techniques; and
- too much managerial focus on “fire-fighting” and routine tasks rather than on forward strategy.

- 3.18** Whilst skills deficiencies are a significant factor in explaining the UK’s poor productivity relative to France and Germany, recent studies estimate that they are responsible for only 1% of the gap with the US⁹. That gap is due to the US’ higher levels of capital stock per worker (and particularly in ICT stock), and better performance in terms of innovation, entrepreneurship and the way they combine their resources (Total Factor Productivity – TFP). Higher TFP gives the US a 15% productivity advantage over the UK, which is just under half of the total gap. To understand this, even if UK workers had the same level of capital, and worked as long as US workers, US productivity would be still be 15% higher¹⁰.
- 3.19** Research using industry level data on training and productivity¹¹ found that industry productivity levels are significantly higher if more training is undertaken. The study also finds that the overall effect of training on productivity is about twice as high as the wage effect (e.g. raising the proportion of workers trained in an industry by, say, 5 percentage points is associated with a 4% increase in average value added per worker and a 1.6% increase in wages) implying that it is beneficial to train workers.
- 3.20** In terms of business performance, there is relatively little evidence on the strength of the link between investment in skills and company profit. Attributing improvements in financial performance directly to skills investment is difficult as there are many factors that influence profitability. There is however, a growing body of evidence, particularly in the US¹², that after controlling for other factors, the companies who made above average investment in education and training saw greater returns than the market average over a 5-year period. The same research concludes that the way businesses categorise such investment in human capital can itself lead to under-investment in skills development. Companies who treat human capital and its development as an asset rather than a cost realise higher, long-term returns.
- 3.21** Whilst changes within firms are important, research has shown that a large proportion of productivity growth arises from new, more productive firms starting up and less productive ones closing¹³. This implies that workforce development should look to the workers’ next job as much as the current one.

9 *Britain’s relative productivity Performance: Updates to 1999*, O’Mahony, de Boer, NIESR, 2002

10 *Prosperity for All, The Strategy: Analysis*, DTI, 2003

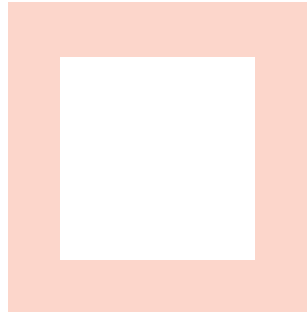
11 *Who gains when workers train? Training and corporate productivity in a panel of British industries*, Dearden et al, IFS, 2000.

12 *Investing in companies that invest in People*, Bassi and McMurrer, HR.com. 2002

13 *Restructuring and Productivity Growth in UK manufacturing*, Disney, Haskel, Heden, 2003

3.22 The drivers of productivity (Investment, Innovation, Enterprise, Competition and Skills) are complementary and interdependent, so introducing measures to improve one may require improvements to other factors before benefits can be fully realised. For example, increased use of technology may require a higher skilled workforce to operate it. Indeed, research has shown that a permanent 10 percentage point increase in the number of firms reporting skilled labour shortages in an industry will lead to a permanent 10% reduction in its fixed capital investment and a temporary 4% reduction in its R&D expenditure¹⁴. This suggests that a lack of skills act as a constraint on capital investment, and that investment in human capital and physical capital are strategic complements, and that raising skills could create a more favourable environment for business to flourish.

14 Human Capital, Investment and Innovation: What are the connections?, Nickel & Nicolitsas, IES, University of Oxford, 1997



SECTION 4:

Skill Demand

4.1 Recent research suggests that, while there are differences in particular sectors and jobs, skills demand by employers continues to rise. The Employer Perspectives Survey found that 60% of all jobs had experienced a significant increase in skills in the five years to 2002. This level of increase in skill demand was apparent in the public and private sector, manufacturing and services, and large and small firms¹⁵.

MEASURING EMPLOYER DEMAND FOR SKILLS

4.2 Employer demand for skills is to a large extent determined by their product and service markets and the way they organise and operate their businesses. However, this is not to say that skill demand should simply be seen as a static reflection of the skills employers currently say they need. There are 3 potential aspects of demand:

- (a) skill demand derived from where employers are now and where they plan to go with their businesses [*known demand*];
- (b) demand likely to arise if employers change their business strategies in ways not currently planned [*latent demand*]; and
- (c) demand which would occur if employers changed their business strategies in line with a vision of the economy which maximised national prosperity [*optimum demand*].

¹⁵ *Employer Perspective Survey*; F. Green, K. Mayhew, and E. Molloy. (2003)

- 4.3 The extent and nature of demand from (b) and (c) is much more difficult to measure because it is only potential demand dependent on whether employers make significant shifts in their business strategies. Some estimates have been made of the size of latent demand. Research carried out for the Skills Task Force found that, for the four in ten employers who were considering changing their business strategies, 90% identified skills they would need to enable this to happen¹⁶. The Employer Perspective Survey produced a similar estimate with one in five employers saying that they would be unable to change business strategies because of a lack of skill¹⁷.
- 4.4 Given the uncertainty of projecting what latent or optimum skills demand might be, the rest of this section concentrates only on current actual demand.

MAIN FACTORS LEADING TO AN INCREASED DEMAND FOR SKILLS

- 4.5 Increased employer demand for skills is linked to 3 key factors:
- (a) **Product or service specification** – the extent to which an employer is competing in rapidly evolving markets where they need to keep one step ahead of the competition in meeting customer needs;
 - (b) **Technological change** – the extent to which an employer adopts leading edge practices in terms of both business methods and equipment used; and
 - (c) **Global competition** – the extent to which an employer is competing mainly in a domestic market insulated from the pressures to improve value-added through higher business strategies prevalent in the global market place.
- 4.6 Recent evidence has shown how each of these factors is related to an increased demand for skills (see Chart 9):
- (a) Skills are said to have “gone up a lot” in nearly 40% of jobs in establishments producing high specification products or services, compared to less than 30% of jobs in establishments with lower product or service specifications;¹⁸
 - (b) Skills are reported to have risen a lot in over 40% of establishments with high levels of technological change compared to just 25% in other establishments;¹⁹ and
 - (c) The complexity of products and services of firms rises in relation to whether they compete mainly in local, national, European or World markets.²⁰

16 *Skills for All: Research Report from the National Skills Task Force*; National Skills Task Force (2000)

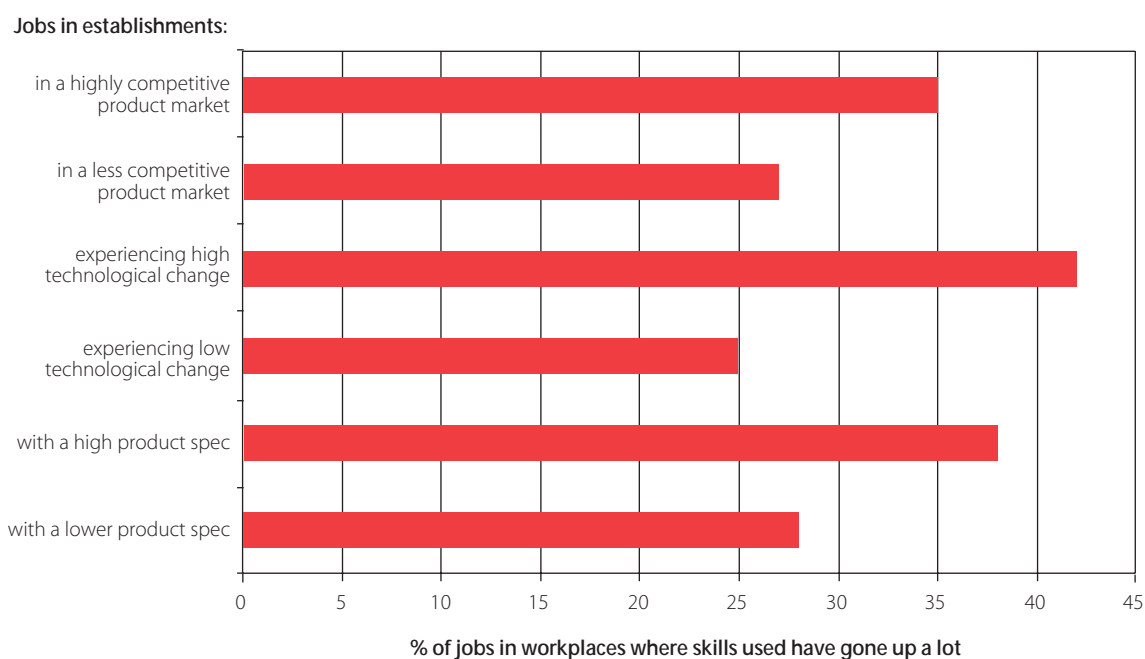
17 *Employer Perspective Survey*, F. Green, K. Mayhew, E. Molloy (2003)

18 *Employer Perspectives Survey*, F. Green, K. Mayhew, E. Molloy (2003)

19 *Employer Perspectives Survey*, F. Green, K. Mayhew, E. Molloy (2003)

20 *Enterprise Product Strategies and Employer Demand for Skills in Britain: Evidence from the Employer Skills Survey*, G. Mason (forthcoming)

Chart 9: Demand for skills and workplace business strategies



Source: *Employer Perspectives Survey*, F. Green, K. Mayhew, E. Molloy (2003)

4.7 Not all of these factors are increasing the demand for skills as much as they might. Research suggests UK firms lag behind international competitors in adopting new technologies and work practices²¹ and produce fewer radical innovations.²² The Innovation Review from the DTI has stressed the importance of skills in supporting more ambitious business strategies through innovation. However, not all of these factors result in an increase in skills for all jobs – some lead to a significant increase in jobs at lower skill levels as discussed below.

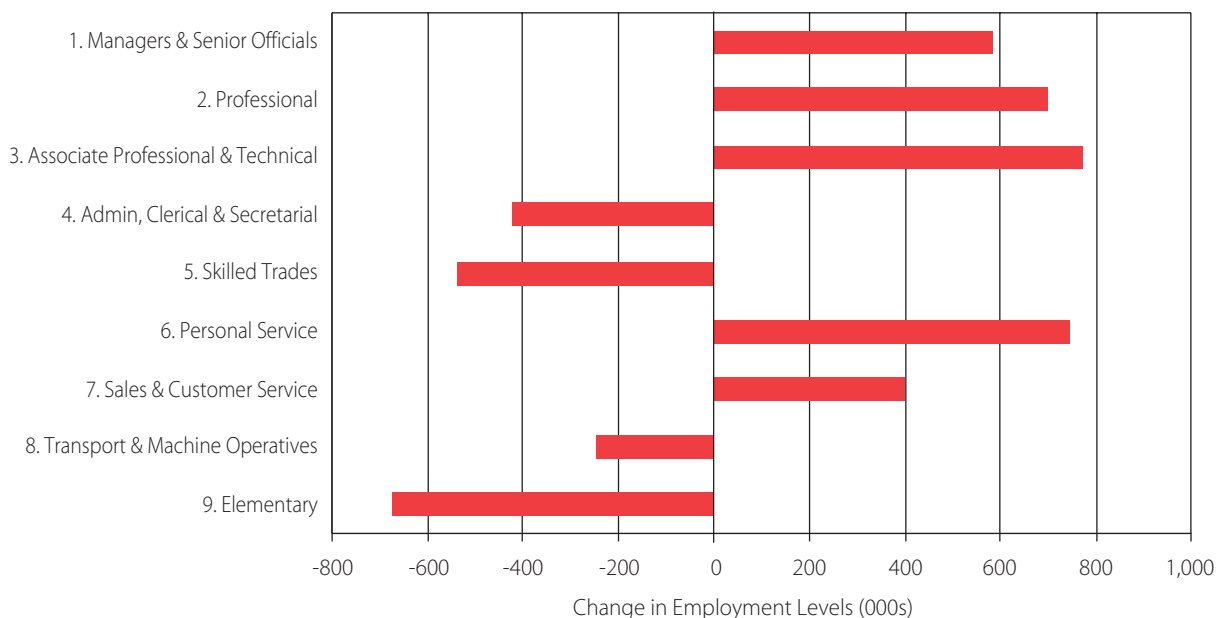
HOW EMPLOYER DEMAND FOR SKILLS IS CHANGING

4.8 Trends in the occupational and sectoral mix of jobs provide a key indicator of how the demand for skills is changing. While the skills demanded in jobs do differ within occupational groupings, there is sufficient commonality to use the groupings as a proxy for changing skill needs.

21 *Legacy Effects in Radical Innovation: A study of European Banking*; E, Schlie, J Prabhu, and R Chandy, Judge Institute of Management working paper (2003)

22 *"The Incumbent's Curse? Incumbency, Size and Radical Product Innovation"*; R Chandy and G Tellis, *Journal of Marketing*, 64 (3), 1-17 (2000).

Chart 10: Change in employment levels by occupational group, 2002-12, UK: All industry sectors



Source: *Working Futures: National Report 2003-4*, R. Wilson, K. Homenidou and A. Dickerson (2004)

4.9 Projections of changes in jobs by occupation between 2002-2012 are expected to maintain the general trends that have been observable for some time.²³ Chart 10 sets out these trends. They are based on projected net change in the relative demand for skills between different skill groups (i.e. they do not take account of the skills demand that arises from normal demographic turnover within groups). The trends are:

- significant growth in employment in all higher level occupations – managers, professionals and associate professionals;
- a decline in employment in lower level manual and non-manual occupations where tasks can be replaced by ICT and other technologies – i.e. clerical, craft and elementary occupations; and
- growth in employment in personal service occupations for jobs – where tasks are not easily automated, and which cater for increased leisure time and an ageing population, and sales occupations.

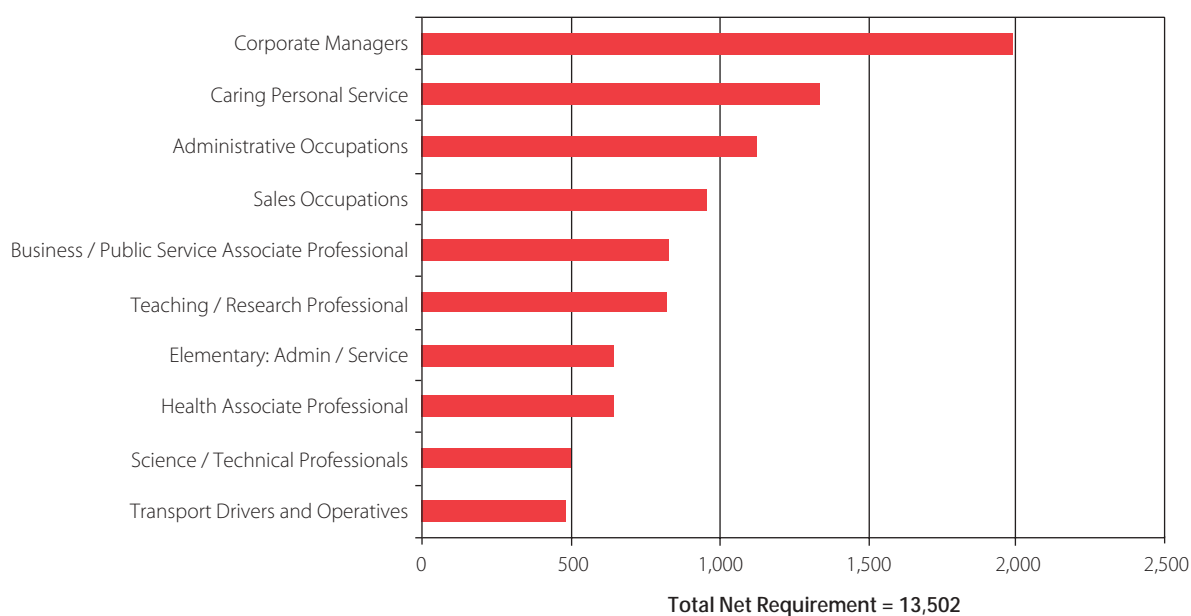
4.10 But employers’ future demand for skills will not simply reflect the anticipated net change in employment (expected to be an additional 1.3 million between 2002 and 2012) but also the “turnover” demand for workers to replace those who leave the labour market, primarily through retirement. This turnover factor is massively greater than the net change in employment patterns, expected to be 12.2 million over the same period. The demand from net change in employment and turnover is termed the net requirement for jobs.

23 *Working Futures: National Report 2003-4*, R. Wilson, K. Homenidou and A. Dickerson (2004)

4.11 The jobs with the biggest net requirement are shown in Chart 11 and will be:

- **Corporate Managers** – 2 million needed by 2012: research suggests there has been a surge in demand for senior managers in recent years;
- **Teaching and science professionals and health associate professionals** such as teachers, biologists, engineers and nurses where there will be just over 2 million job opportunities by 2012;
- **Business/Public Service Associate professionals** such as finance and investment analysts, trainers and environmental health officers where the labour market will need just over 800,000;
- **Caring personal service occupations** such as care assistants, child minders and travel agents as well as sales assistants and call centre agents with a combined demand of 2.25 million people;
- **Semi-skilled and unskilled jobs in administrative and elementary occupations**, such as office clerks and porters, and transport drivers, with a combined demand of some 2 million.

Chart 11: Net requirement (000s), 2002-12, top 10 occupations

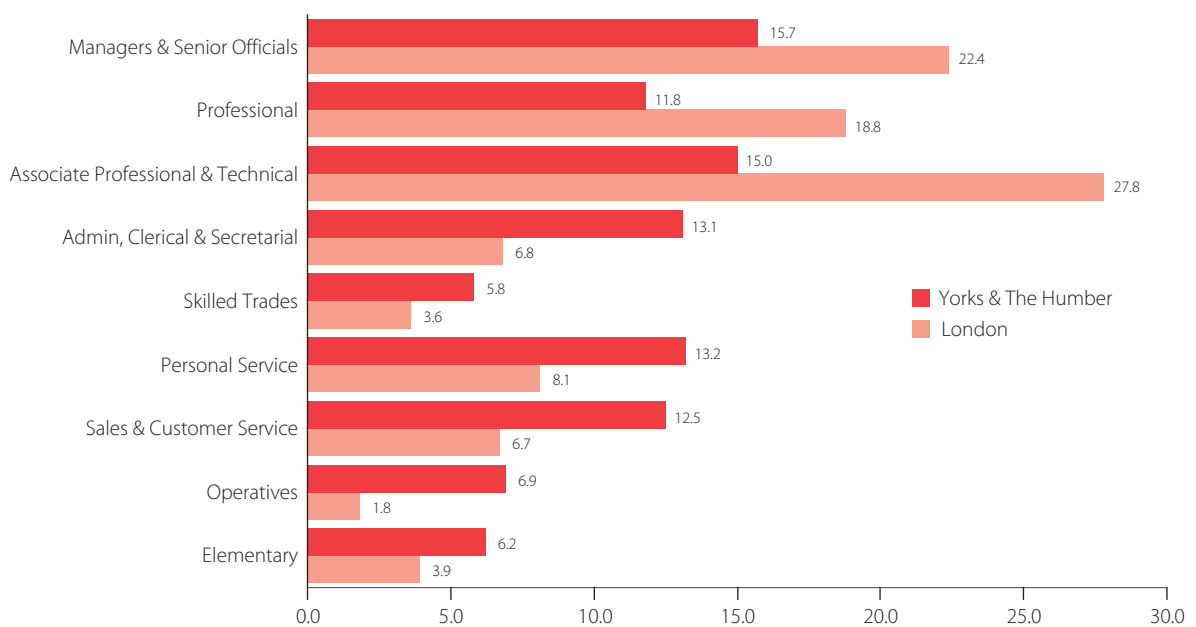


Source: *Working Futures: National Report 2003-4*, R. Wilson, K. Homenidou and A. Dickerson (2004)

4.12 The overall picture is therefore complex with job opportunities projected to increase in a range of areas, some demanding a relatively high level of skills, with others at lower levels. Most additional jobs resulting from the net change in employment will be in higher level occupations, though there will be extra jobs in some lower skilled service areas. At the same time, there will be large skill demands in all occupations to replace those leaving the labour market through normal demographic turnover, as shown in Chart 11 above.

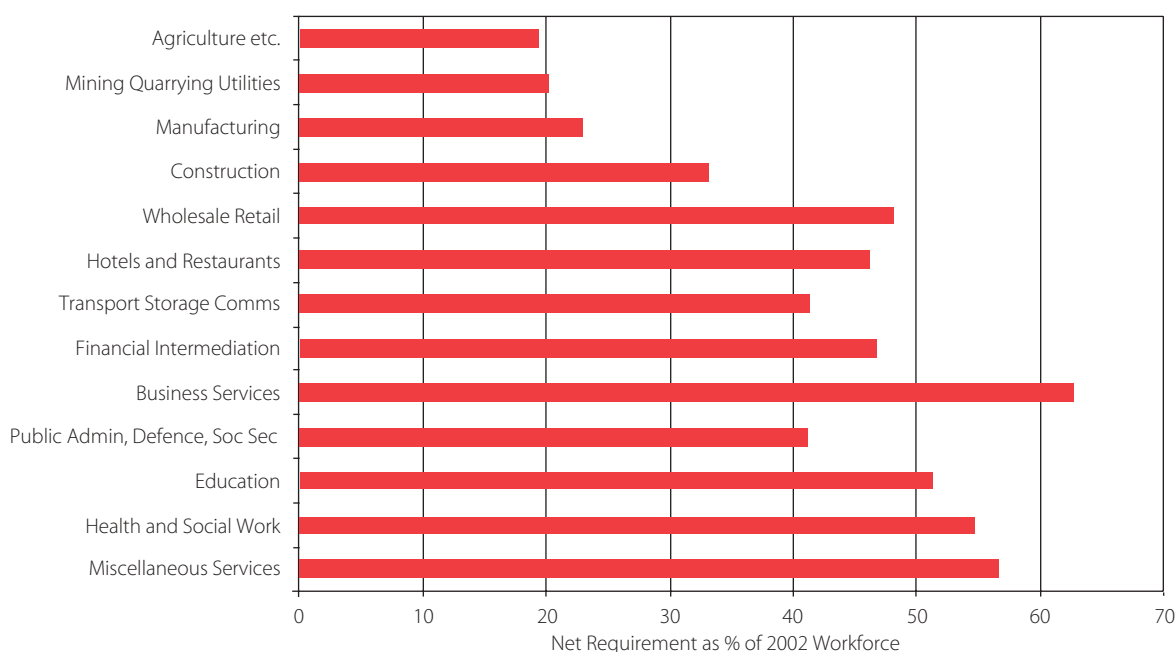
4.13 There is expected to be a wide variation in the types of job opportunities between the English regions. For example, in the North East, Yorkshire and the Humber, and East Midlands the net requirement will be much less concentrated in higher occupational groups than in London. In London some 80% of job opportunities will be in jobs at skilled craft level or higher compared with some 60% in the North East, Yorkshire and the Humber, and East Midlands. See Chart 12 for a more detailed comparison of job opportunities in London and Yorkshire and the Humber.

Chart 12: Net requirement 2000-12 – proportion within the region



Source: *Working Futures: National Report 2003-4*, R. Wilson, K. Homenidou and A. Dickerson (2004)

4.14 All economic sectors will have a significant net requirement to 2012, as shown in Chart 13. But there will be wide variations in the extent of the demand. The largest increase relative to employment levels in 2002, 62 per cent in Business Services, will be more than three times the smallest, 20 per cent in Agriculture and Mining.

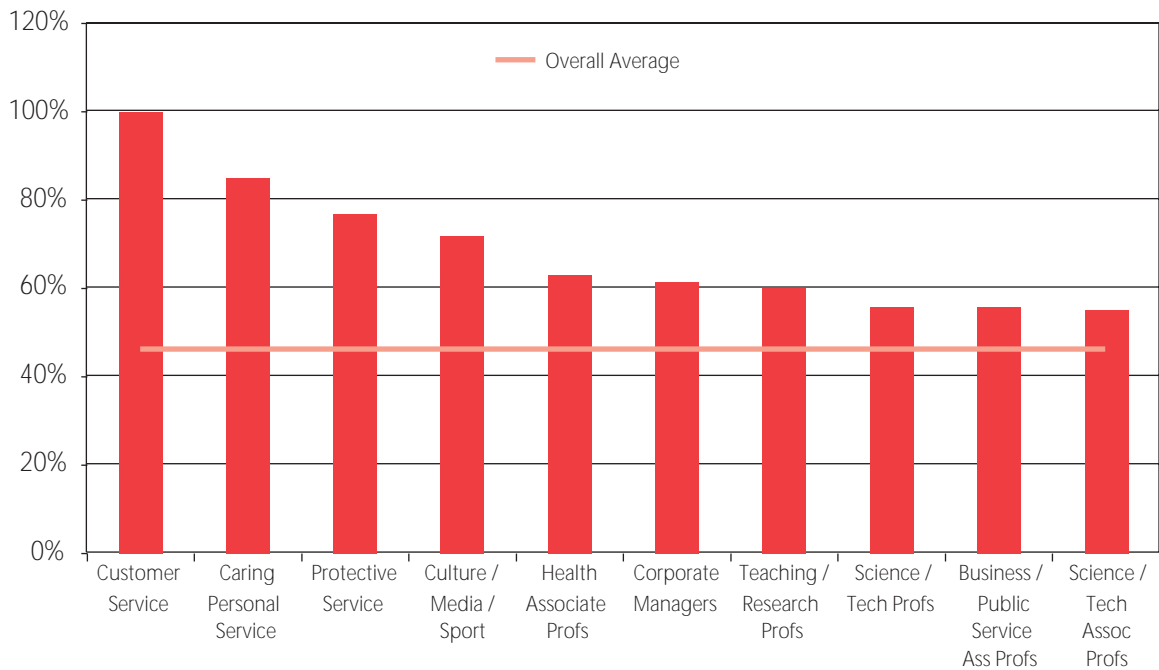
Chart 13: Net requirement by sector, 2002-12

Source: *Working Futures: National Report 2003-4*, R. Wilson, K. Homenidou and A. Dickerson (2004)

4.15 Future demand will be partly related to the current distribution of jobs, and partly to areas where additional jobs are expected to be created. It is those areas where current labour turnover is high and/or where future demand is large where problems in meeting demand are likely to be greatest. Chart 14 shows the occupations where the fastest change in net requirement for workers is expected. These are:

- (a) Lower level service occupations and customer service jobs such as those in call centres and those to deal with anticipated growth in e-commerce; and caring personal service jobs to deal with the growing demand for childcare and an ageing population;
- (b) Public sector professional and associate professional occupations such as police, fire and prison officers, doctors and nurses, and teachers;
- (c) Managers across all sectors of the economy; and
- (d) A mixture of professionals and associate professionals providing services to business (accountants, consultants, IT support and graphic designers) and consumers (fitness instructors).

Chart 14: Percentage increase in net requirement, 2001-12, top 10 occupations

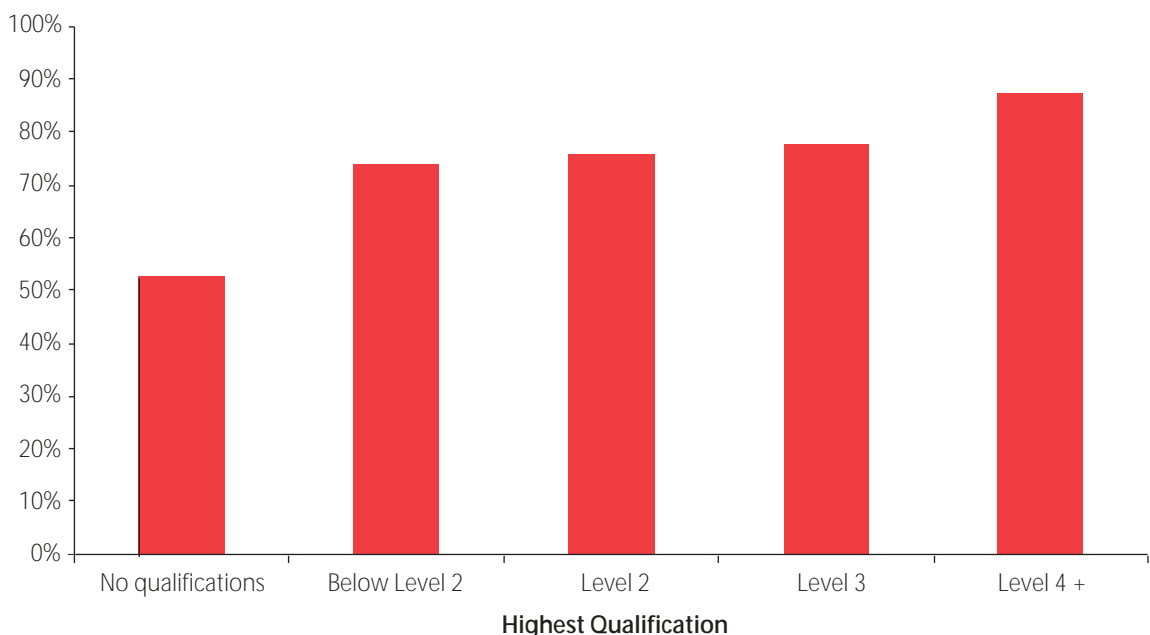


Source: *Working Futures: National Report 2003-4*, R. Wilson, K. Homenidou and A. Dickerson (2004)

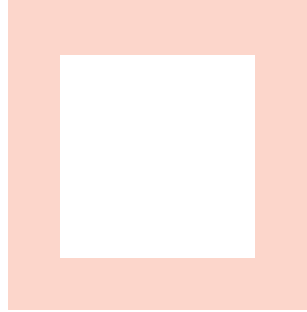
BUT EVERYBODY WILL NEED SOME SKILLS

4.16 This pattern of net growth in job opportunities implies continuing increases in demand for skills – and that is only taking account of known demand (see paragraph 4.2). Even in relatively low skilled occupations, there is likely to be growing demand for generic employability skills, including communication, customer handling, problem solving and ICT. Higher qualification levels are associated with higher employment rates. As shown in Chart 15, those with some qualifications are half as likely again to be in employment as those with no qualifications.

Chart 15: Employment rate by highest qualification held



Source: *Labour Force Survey, Winter 2003*



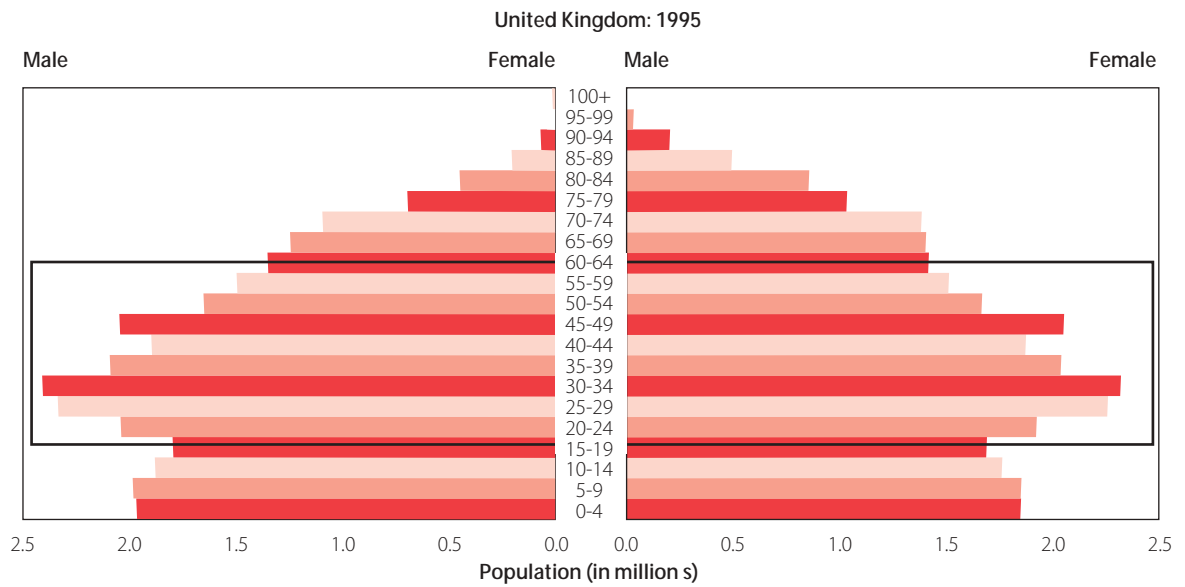
SECTION 5:

Skill Supply

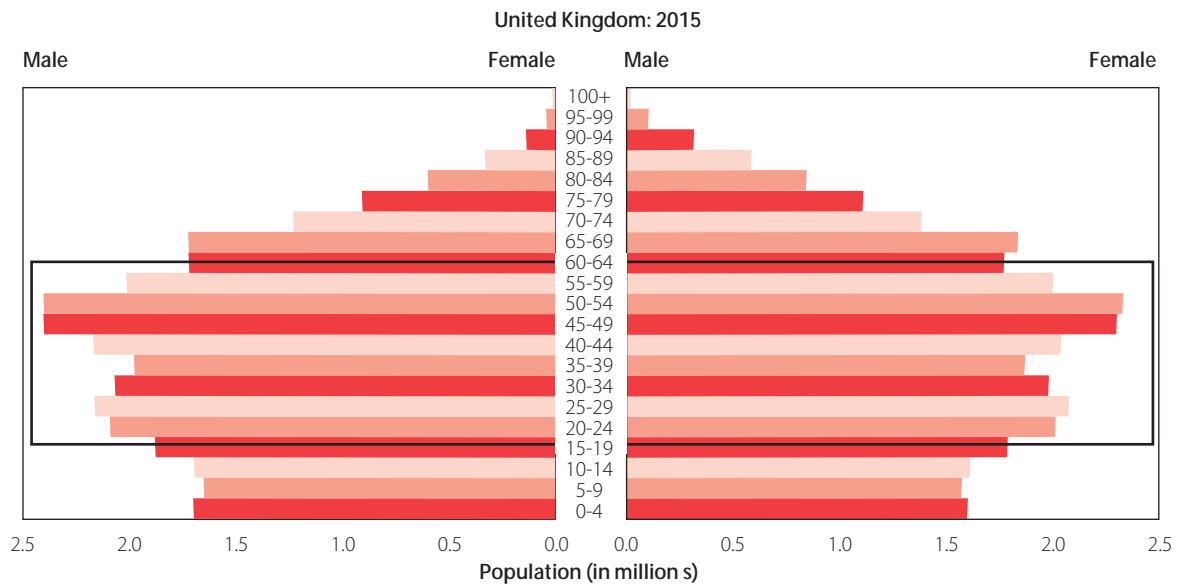
DEMOGRAPHICS

- 5.1 The age profile of the UK working age population is changing significantly. In 1995, the majority of those of working age were under 40. By 2015, that position is reversed, with around 55% of those of working age over 40 (see Chart 16). It will not be possible to depend on the inflow of young people to meet skill need. We must regularly upskill and reskill our older workers. Failure to do that will weaken our industrial base, reduce productivity and competitiveness.

Chart 16: UK Population by Age, 1995 and 2015



Source: U.S. Census Bureau, International Data Base.

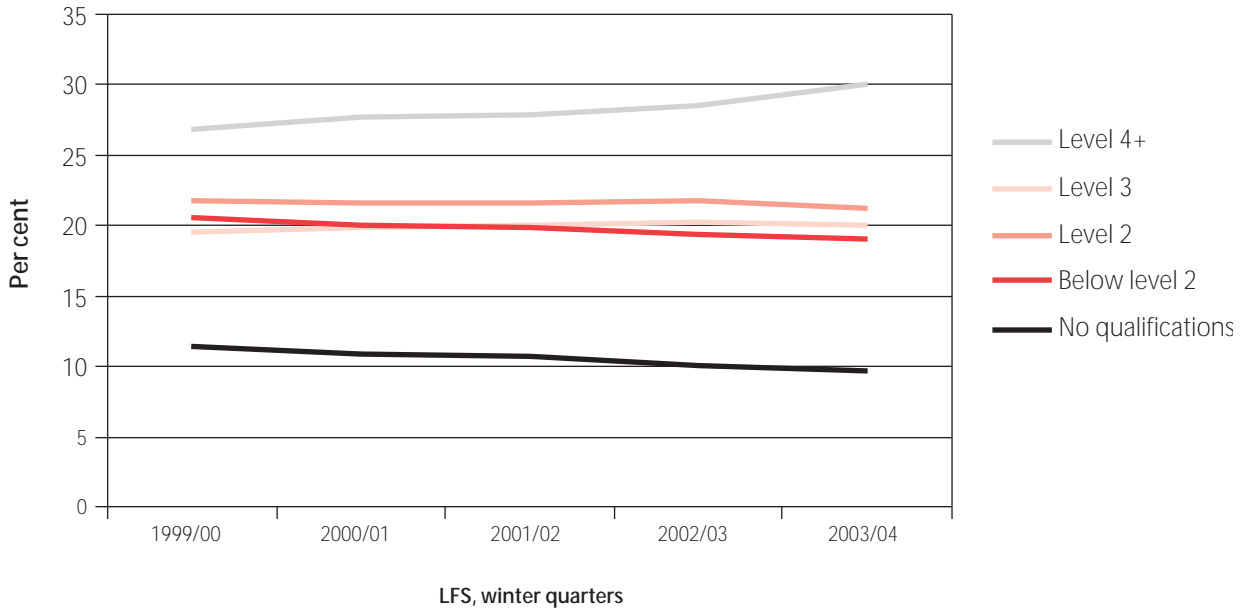


Source: U.S. Census Bureau, International Data Base.

QUALIFICATIONS

- 5.2 Qualification levels in the workforce continue to rise. As shown in Chart 17, over 50% of the workforce are now qualified at NVQ level 3 (equivalent to 2 GCE A levels) or higher. However, there is still a long tail of poorly qualified adults – over one in four adults in the workforce does not have a full level 2 qualification (equivalent to 5 GCSEs at grades A*-C).

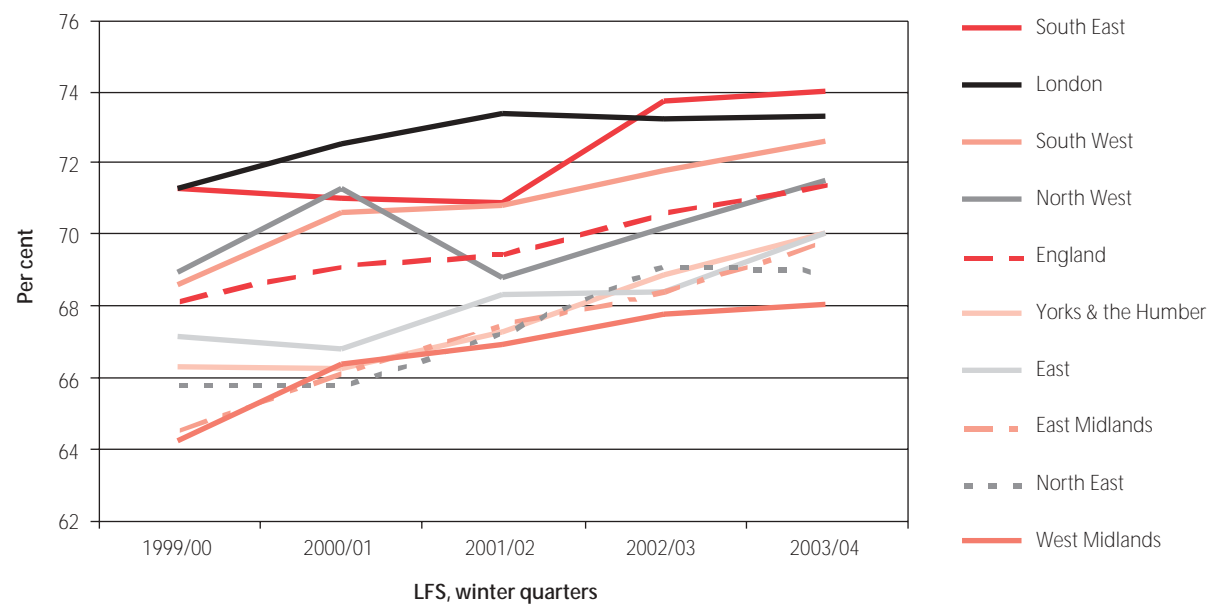
Chart 17: Level of highest qualification held



Source: Labour Force Survey 1999-2004 (Winter Quarters)

5.3 There are significant variations between regions in qualification levels, with the regions in the south having higher levels of qualification than those in the north (see Chart 18). However, there is some narrowing of the gap at the lower qualification levels – the gap at level 2 between the top and lowest ranked region has narrowed slightly in the last 4 years.

Chart 18: Proportion of adults with level 2 or higher by region

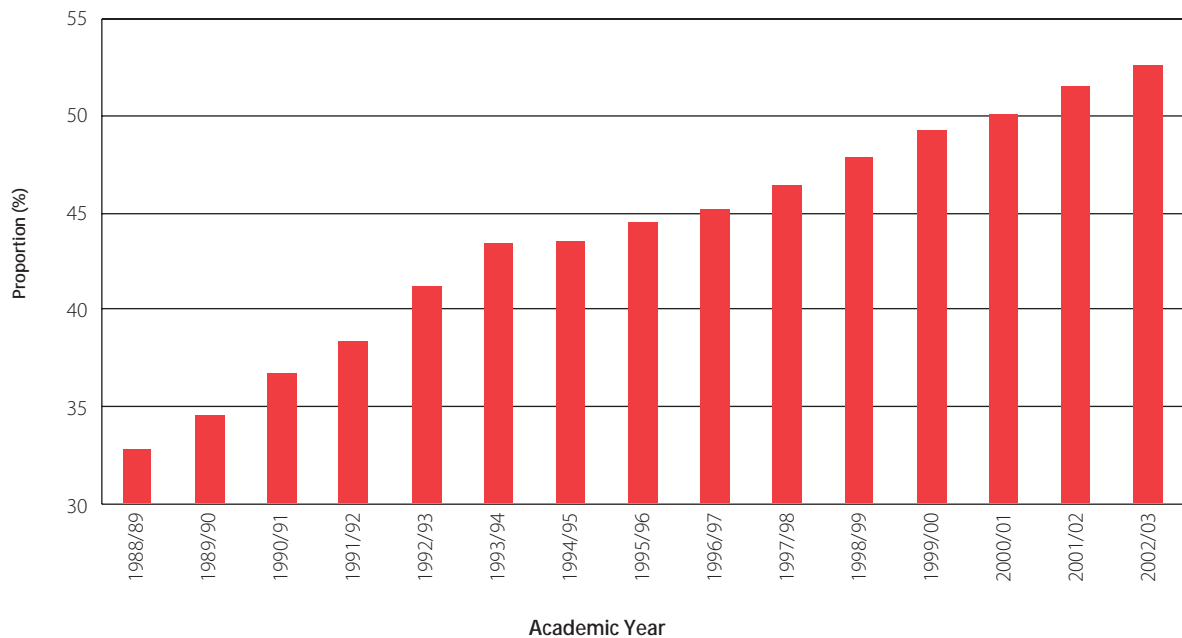


Source: Labour Force Survey 1999-2004 (Winter Quarters)

YOUNG PEOPLE

5.4 Young people make a significant contribution to improving the stock of skills in the labour force as they become economically active. Good progress has been made with the proportion of 16 year olds gaining good GCSE qualifications or their equivalent. By 2002/3 60% more of the 16 year old cohort were gaining 5+ GCSEs at grade A*-C or their equivalent than in 1988/89. While the rate of increase in the proportion reaching this level is slower than the late 1980s, when the introduction of the GCSE exam had a major effect, the increase since 1998 has been larger than in the preceding 5 years (see Chart 19).

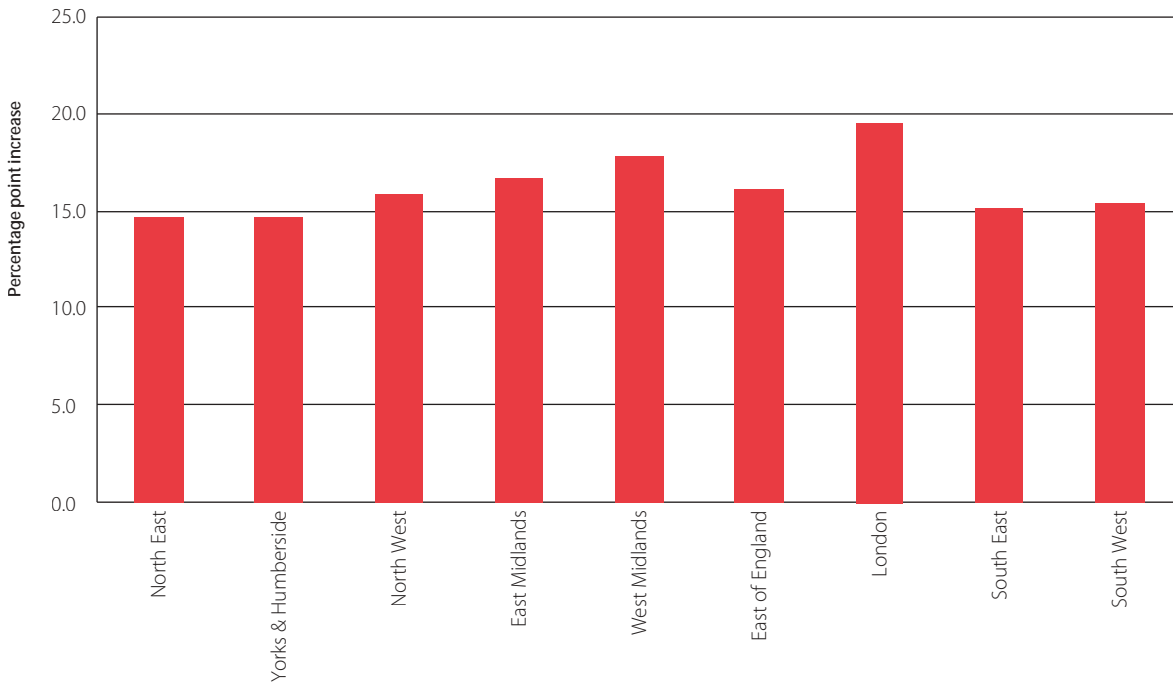
Chart 19: Proportion of 16 year olds achieving 5+ GCSEs at grades A*-C



Source: DfES Schools Performance Data

5.5 There have been significant regional differences in improvements in the proportion of young people attaining 5 good GCSEs (see Chart 20). The biggest increase has been in London – which has moved up from the 8th ranked region in 1992 in terms of the proportion of 15 year olds gaining 5 good GCSEs to 4th in 2003. Lowest growth has occurred in the North East and Yorkshire and Humberside.

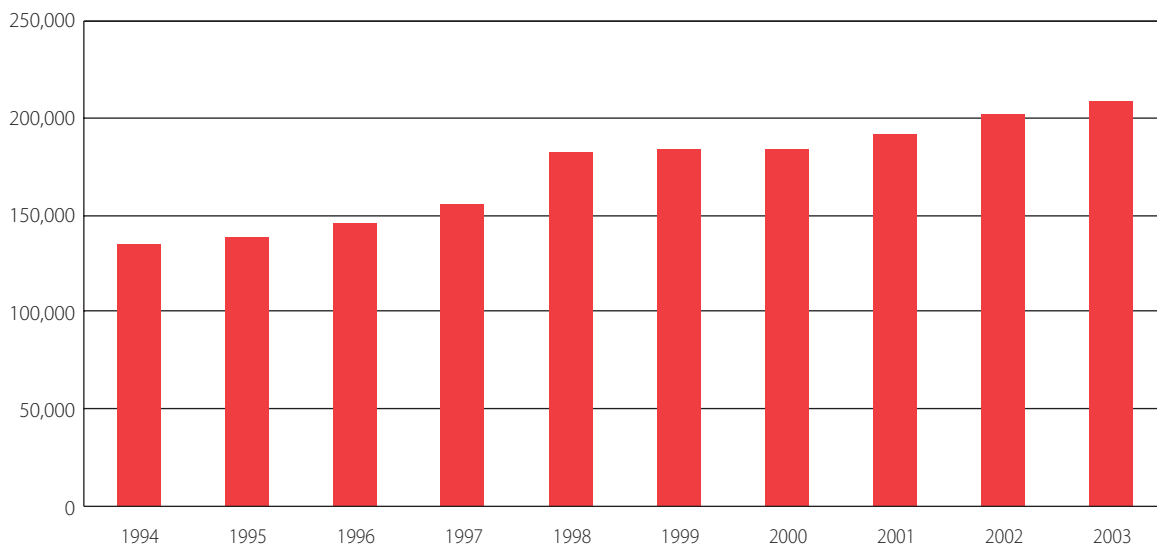
Chart 20: Growth in GCSE/GNVQ achievements at 5 A*-C by region, 1992-03



Source: DfES Schools Performance Data

5.6 The number of 17 year olds achieving 2 A levels or their equivalent has increased by over one-third between 1997 and 2003, as shown in Chart 21.

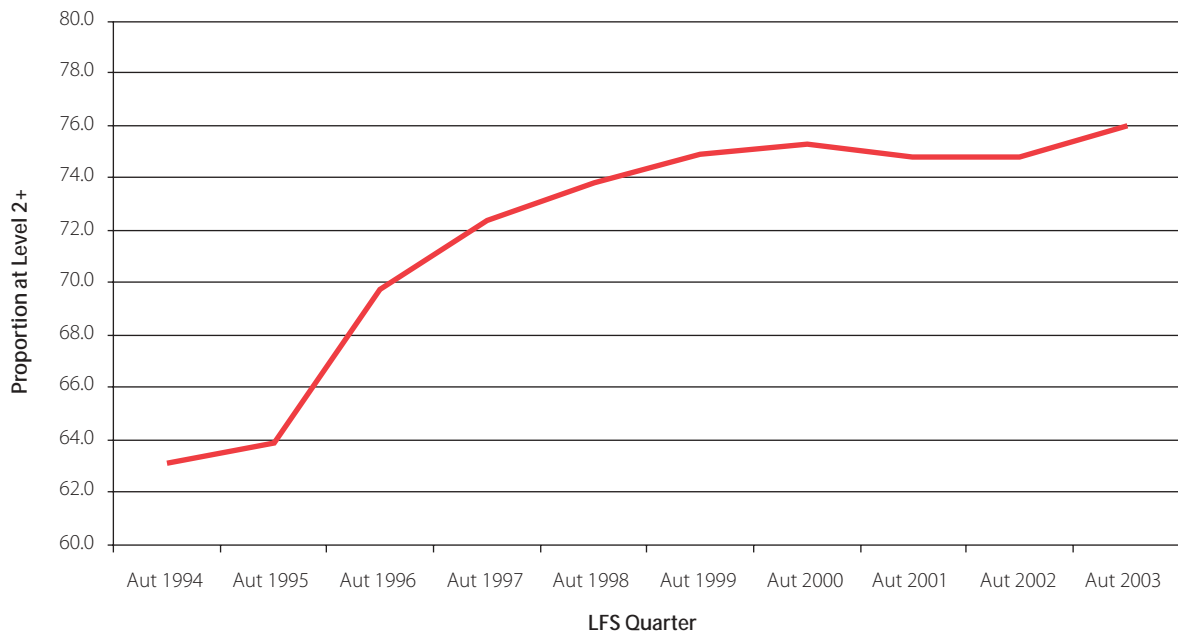
Chart 21: Number of 17 year old students achieving 2+ A levels (or equivalent)



Source: Secondary School and College Performance Tables Data

5.7 As shown in Chart 22, the proportion of young people achieving a full level 2 or equivalent by age 19 has risen over the past 10 years from 63% to 76%.

Chart 22: Proportion of 19-21 year olds at level 2+

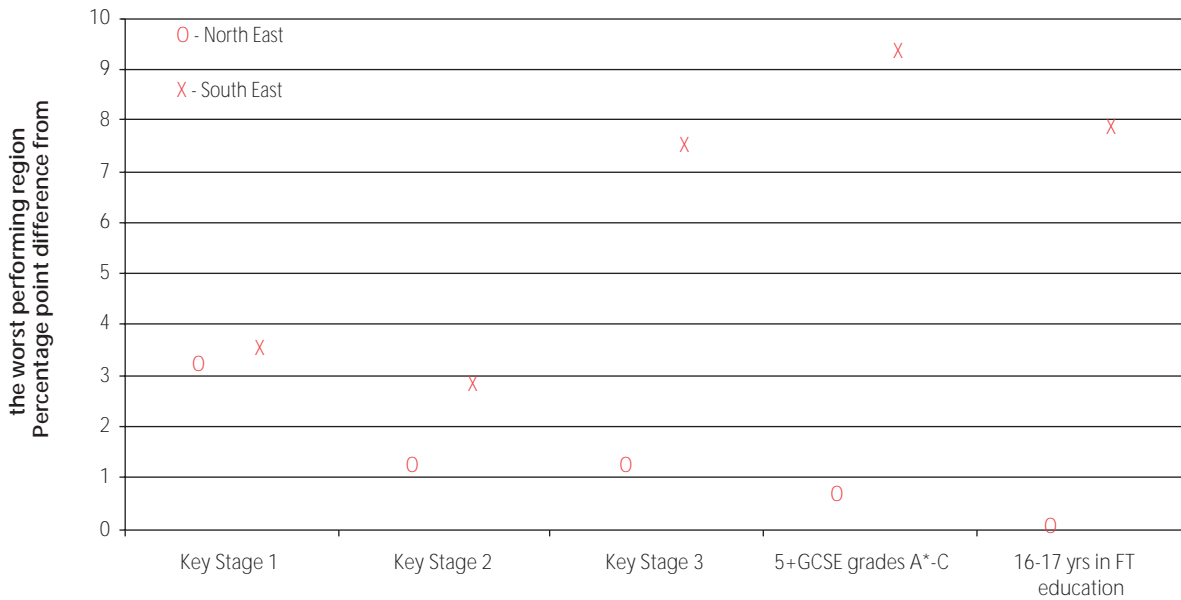


Source: Labour Force Survey, Autumn 1994 – Autumn 2003

REGIONAL DIFFERENCES IN SKILLS SUPPLY FROM YOUNG PEOPLE

5.8 There are significant variations between regions in the participation in learning and levels of achievement by young people. Chart 23 contrasts the relative position for young people in the North East compared to those in the South East. The differences in levels of attainment, and the eventual knock-on effect in terms of participation in full-time education after the compulsory phase (though not in terms of participation in all forms of post compulsory learning), widen with age. The regional differences in qualification levels within the workforce presented earlier in this report partly stem from influences on young people at an early age.

Chart 23: Relative performance/participation in learning by young people – North East and South East

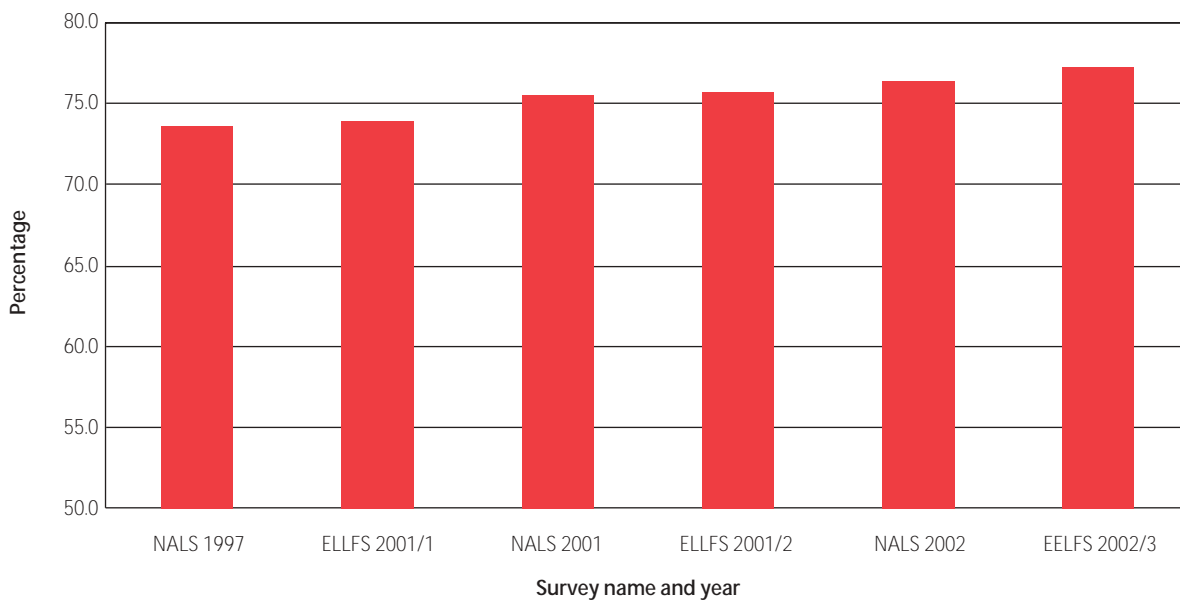


Source: DfES analysis of Key Stage and GCSE results (revised 2003), plus estimates of participation from DfES Bulletin 1/2004

ADULTS

5.9 Over three-quarters of adults have participated in some kind of learning in the past three years (see Chart 24) – 1.2 million more adults now participate in learning compared to 1997.

Chart 24: Trends in adult learning participation



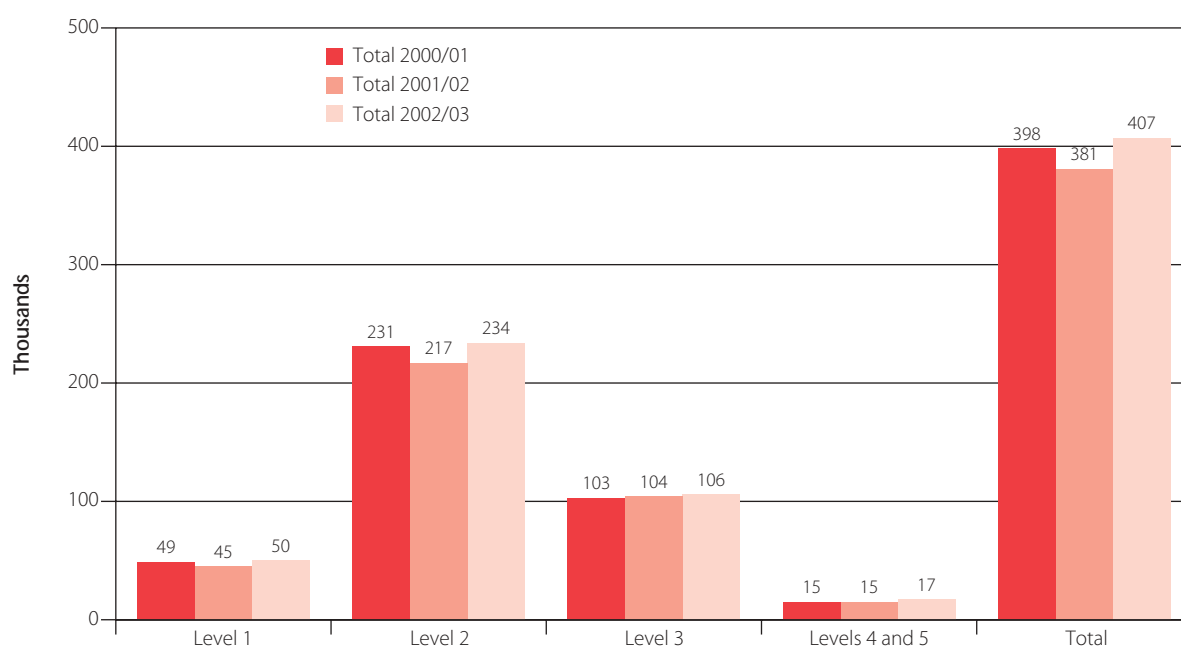
Source: NALS – National Adult Learning Survey, dates of fieldwork March – April 1997, Jan-May 2001, Jan-June 2002; ELLFS – English Local Labour Force Survey, dates of fieldwork March 2000-Feb 2001, March 2001-Feb 2002, March 2002- Feb 2003

5.10 There are major differences in participation in learning depending on the circumstances of the individual. More disadvantaged individuals are least likely to participate in learning:

- Less than a third (29%) of adults with no qualifications participate in learning compared to 94% of those with NVQ level 4 or five qualifications;
- Only 52% of those with basic skills difficulties participate in learning compared to 83% of those without;
- 89% of full-time employees participate in learning compared to 68% of unemployed people and 40% of those unable to work due to a health problem or disability; and
- 92% of those in the top household income bracket (£31,200+) participate in learning compared to 55% of those in the lowest income bracket (below £10,400).²⁴

5.11 This increasing participation in learning is leading to increased numbers gaining qualifications (see Chart 25)²⁵.

Chart 25: Awards of NVQs by level and year, UK



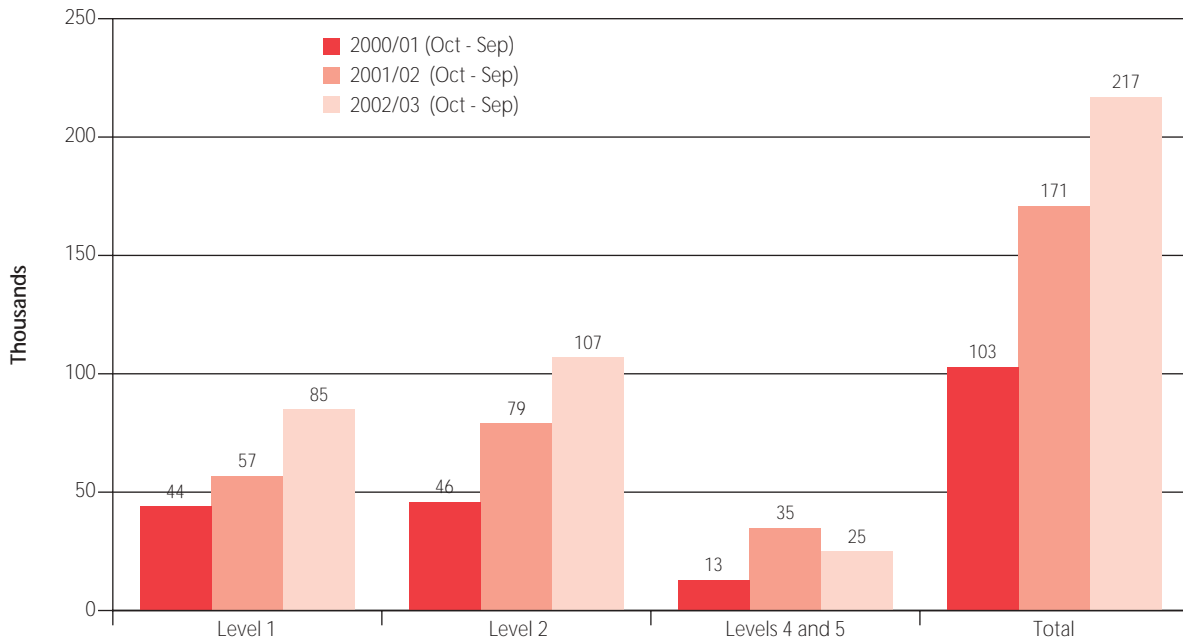
Source: QCA

5.12 There has been particularly significant growth in the numbers gaining key skills qualifications. Awards have doubled between 2000/1 and 2002/3 (see Chart 26).

²⁴ National Adult Learning Survey 2002, DfES (2003)

²⁵ Excludes those awarded SVQs

Chart 26: Awards of Key Skills qualifications by level and year, England



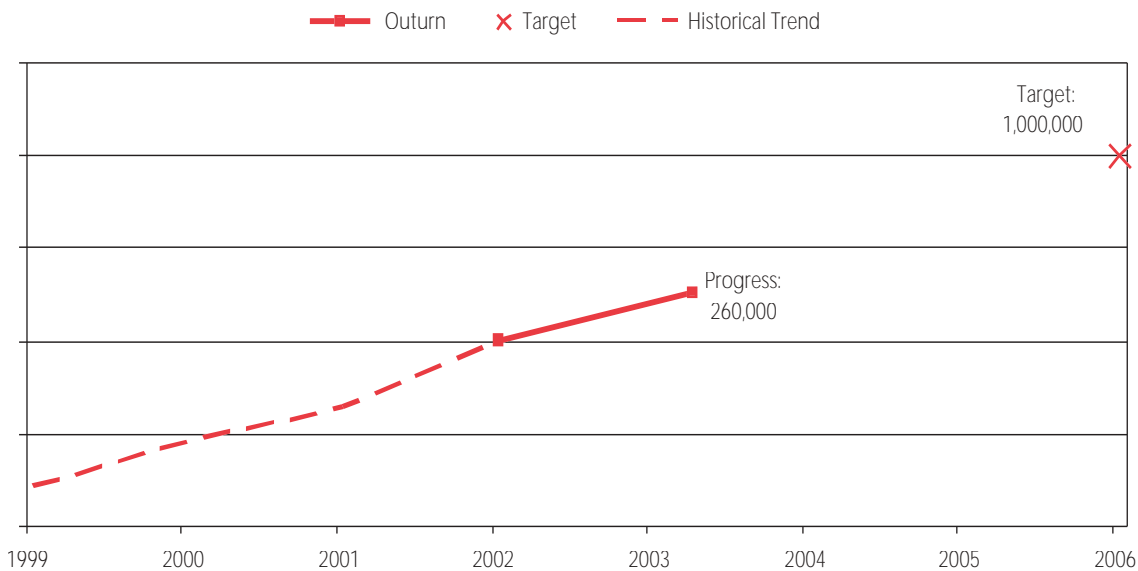
Source: Key Skills Database

5.13 An increase in key skills awards has occurred in all areas – communication, application of number and information technology.

ADULTS AT LEVEL 2

5.14 By winter 2003 the number of adults with a full level 2 qualification or higher had increased by 260,000 compared to autumn 2002 (see Chart 27). The target for 2006 is that there should be 1 million more adults in the workforce with full level 2 or higher than in 2002.

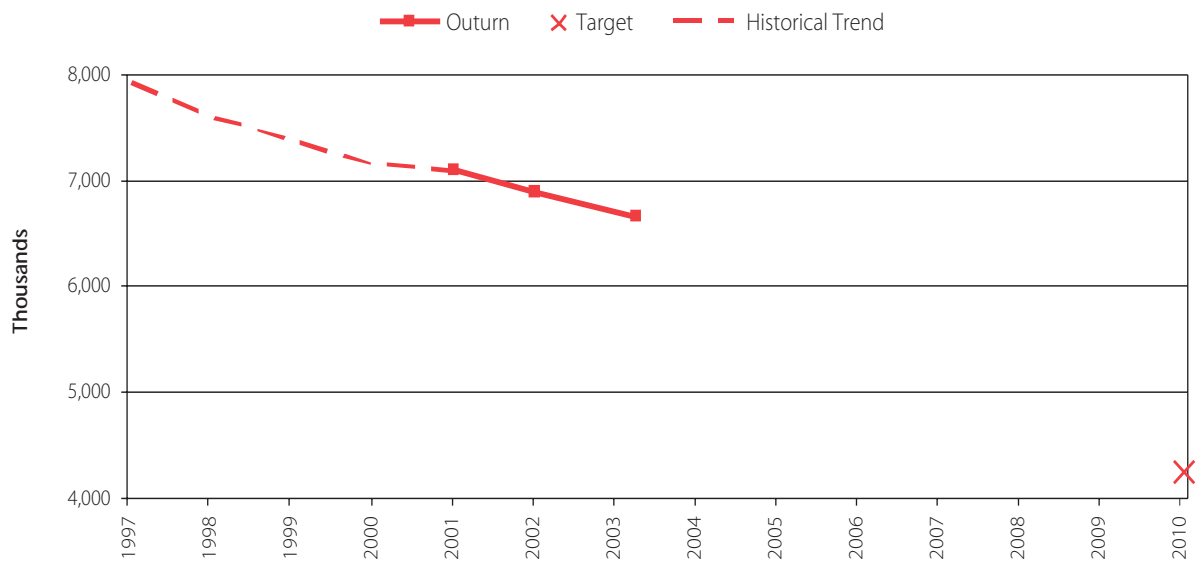
Chart 27: Annual increase in the number of adults in the workforce with level 2 qualifications



Source: Labour Force Survey, 1999-2003

5.15 In winter 2003 the number of economically active adults without at least a level 2 qualification had fallen to 6.7 million (see Chart 28). This represents a reduction of 434,000 compared to autumn 2001, or 6.1% points towards the target 40% reduction by 2010. This reduction is larger than the increase in those gaining level 2 qualifications because it is the aggregate of two effects – turnover within the labour force, with older people retiring and younger, better qualified people entering the labour force, plus the impact of qualifications gained by those in the labour force.

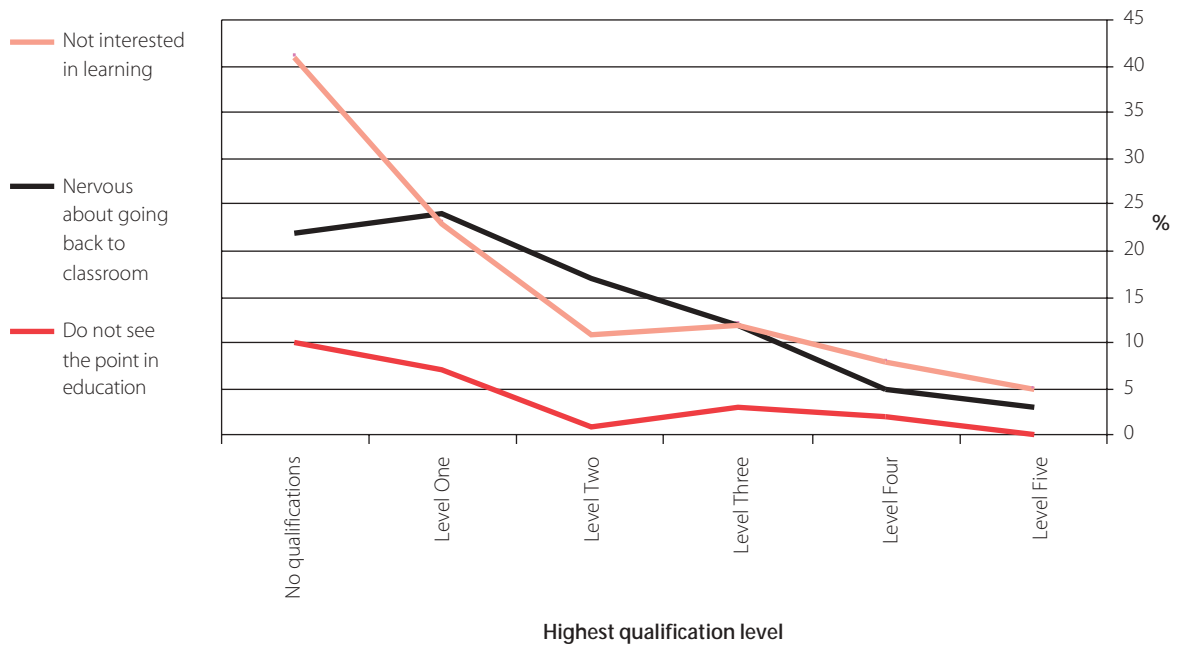
Chart 28: Number of adults in the workforce who lack NVQ level 2 qualifications



Source: Labour Force Survey, 1997-2003

5.16 As Chart 29 shows, adults gaining a level 2 qualification have significantly more positive attitudes to learning than those with qualifications below this level.

Chart 29: Individuals’ attitudes to learning by highest qualification level

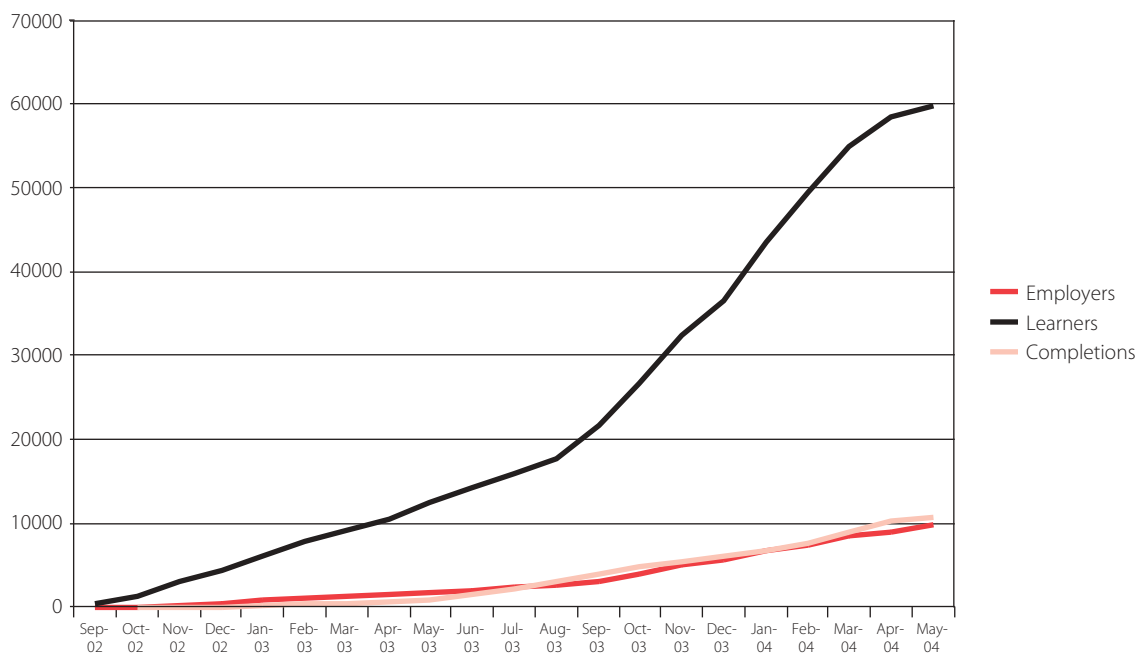


Source: National Adult Learning Survey 2002, DfES (2003)

EMPLOYER TRAINING PILOTS (ETP)

5.17 Employer Training Pilots were set up in 2002 to test ways of engaging more employers in training their low-skilled employees to level 2 qualifications which meet business needs or basic skills qualifications. Initially, the pilots operated in 6 areas, then extended to 12 areas in September 2003, and will be further extended to 18 areas in September 2004. By the end of May, nearly 10,000 employers and 60,000 learners had signed-up. Take-up has accelerated considerably in the second year. One in ten eligible employers in the first six areas are now involved, and around one in twenty in the second six pilots. Over 10,000 learners have completed their training and gained qualifications, 83% of which are level 2 qualifications. Dropout rates have been low – around 9% to date (see Chart 30).

Chart 30: ETP take-up, Sep 02 – May 04



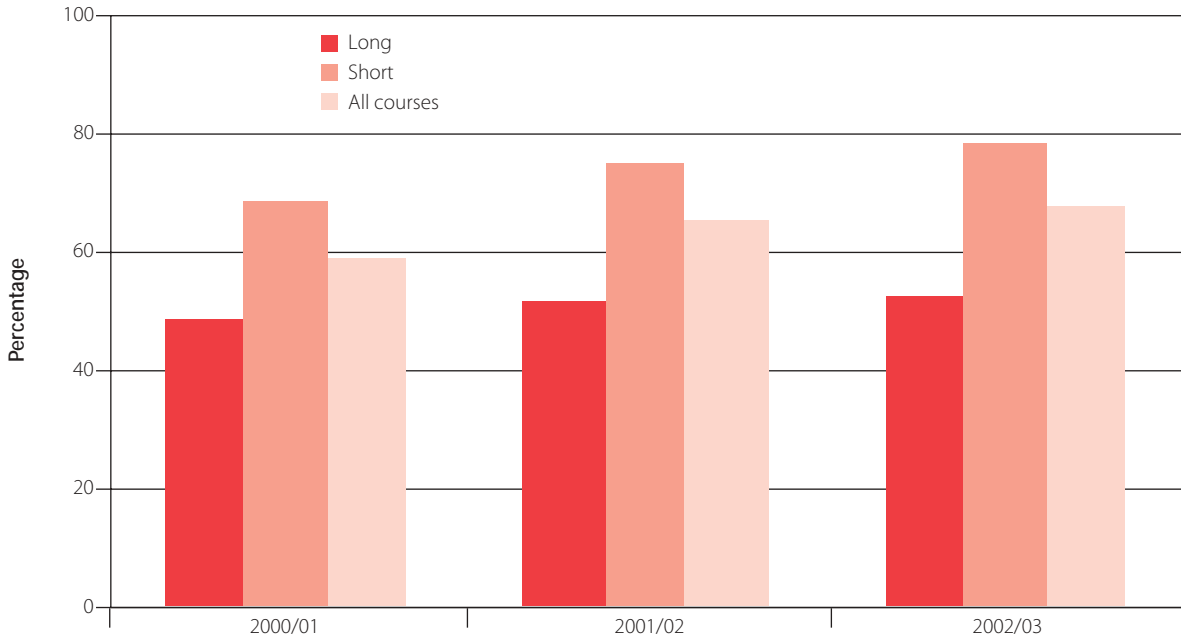
Source: Employer Training Pilots Management Information

ADULTS IN FURTHER EDUCATION (FE)

- 5.18 The further education sector makes a significant contribution towards level 2 qualifications achieved by adults. Provisional estimates indicate that the number of adults studying towards a full level 2 qualification in Further Education in 2003 was 2.3% (over 1,000 learners) higher than in 2002²⁶.
- 5.19 FE colleges are increasing their success rates which are also contributing to higher qualifications levels among adults. As shown in Chart 31, the overall success rates for adult learners in LSC-funded FE rose from 59% in 2000/01 to 65% in 2001/02 to 68% in 2002/03. Recent data also show that the success rate for adults studying full level 2 qualifications rose from 45% in 2001/02 to 50% in 2002/03.

26 Further Education and Work Based Learning for Young People – Learner Numbers in England on 1 November 2003; ILR/SFR03 <http://www.lsc.gov.uk/National/Documents/SubjectListing/SectorData/StatisticalFirstReleases/sfr03.htm>

Chart 31: Success rates of adult learners in LSC-funded FE provision by course length and course end year



Source: Learning and Skills Council benchmarking data

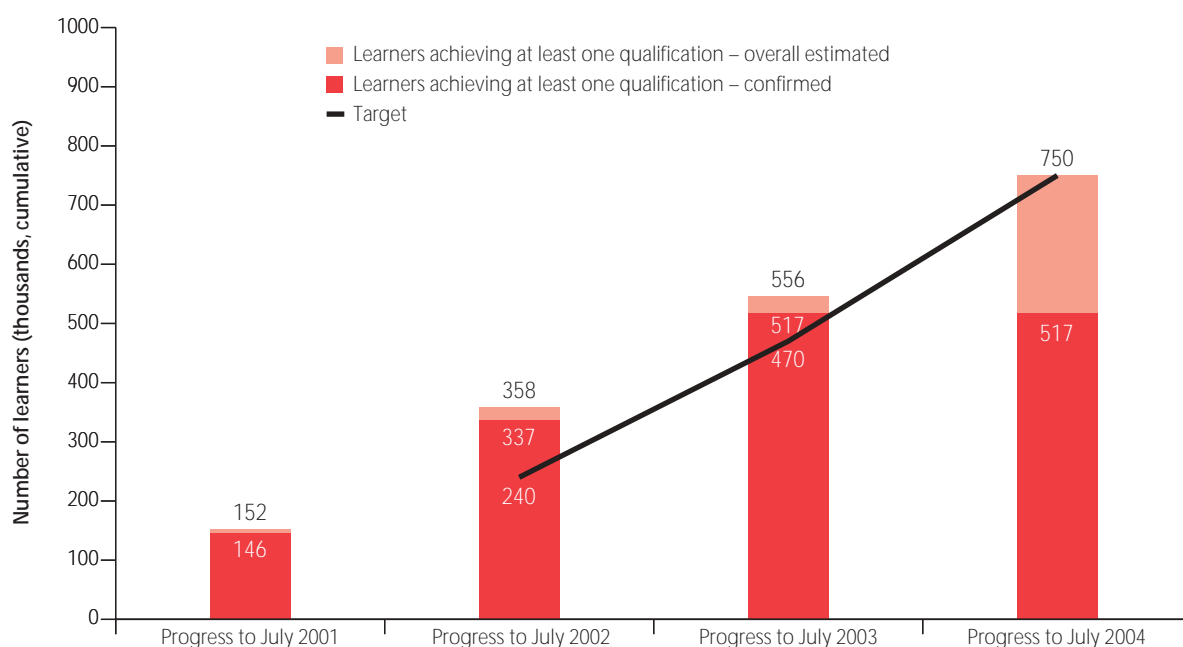
ADULT BASIC SKILLS

5.20 The relatively high proportion of adults with problems with basic skills has been well documented.²⁷ Significant progress has been made in tackling this problem. Chart 32 shows we are on track for 750,000 adults to improve their basic skills by the end of 2004. Recent evidence suggests that good quality basic skills training enables the disadvantaged to take a step on the ladder to employment and help tackle the causes of their social disadvantage.²⁸

27 *The Skills For Life Survey – A national needs and impact survey of literacy, numeracy and ICT skills*; DfES (2003)

28 *Evaluation of the JSA Literacy and Numeracy Pilots*; Mark Peters, Nicola Rousseau and Camilla Lynam-Smith (2003)

Chart 32: Progress against the basic skills target, Jul 01 – Jul 04

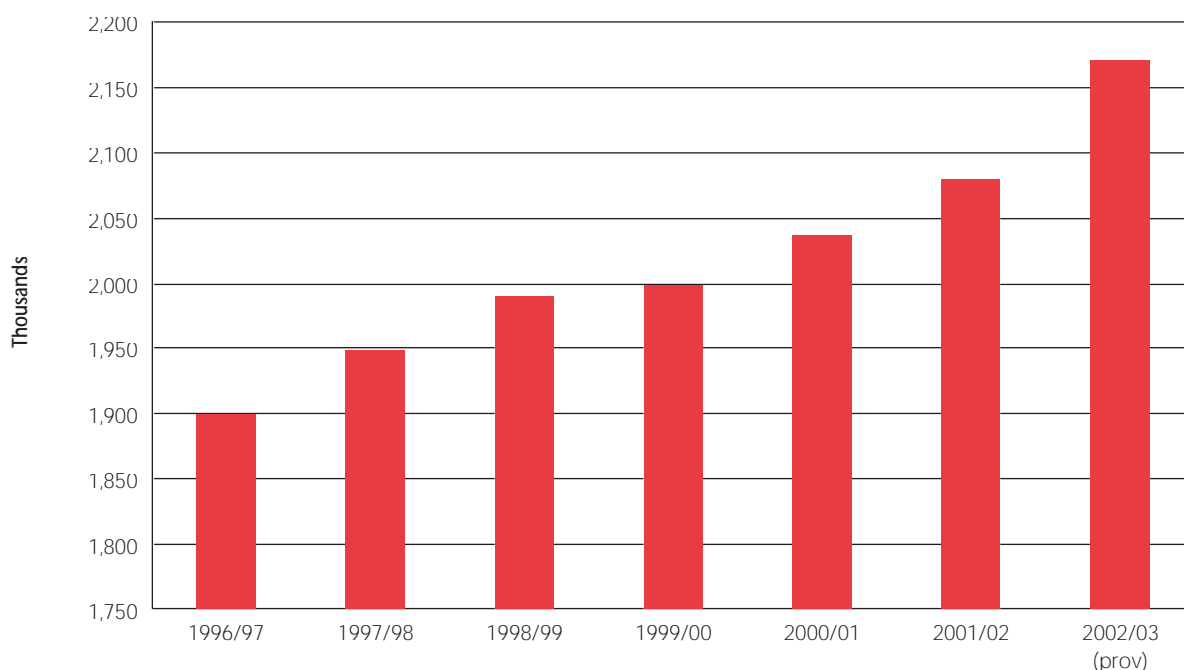


Source: LSC ISR/ILR, Jobcentre Plus and Prison Service

HIGHER EDUCATION (HE)

5.21 Provisional data show there were 2.2 million students enrolled in HE courses in Great Britain in 2002/03: a 4.4% increase compared with the previous year. Chart 33 shows that there have been substantial improvements in student numbers since 1996/97, but the pace of growth has quickened over the past few years. This is making a major contribution to meeting the higher level skills needs of the economy.

Chart 33: All HE enrolments in Great Britain



Source: HESA, LSC, USR, The Education Departments of England, Scotland and Wales, the Open University, the Welsh Assembly and the Scottish Executive. Enrolments are used as a proxy for actual student numbers.

5.22 This increase in student numbers is also reflected in the HE Initial Participation Rate (HEIPR)²⁹. Table 1 shows that the HEIPR has risen by one percentage point a year between 1999/00 and 2002/03.

Table 1: HEIPR, 1999/00 – 2002/03

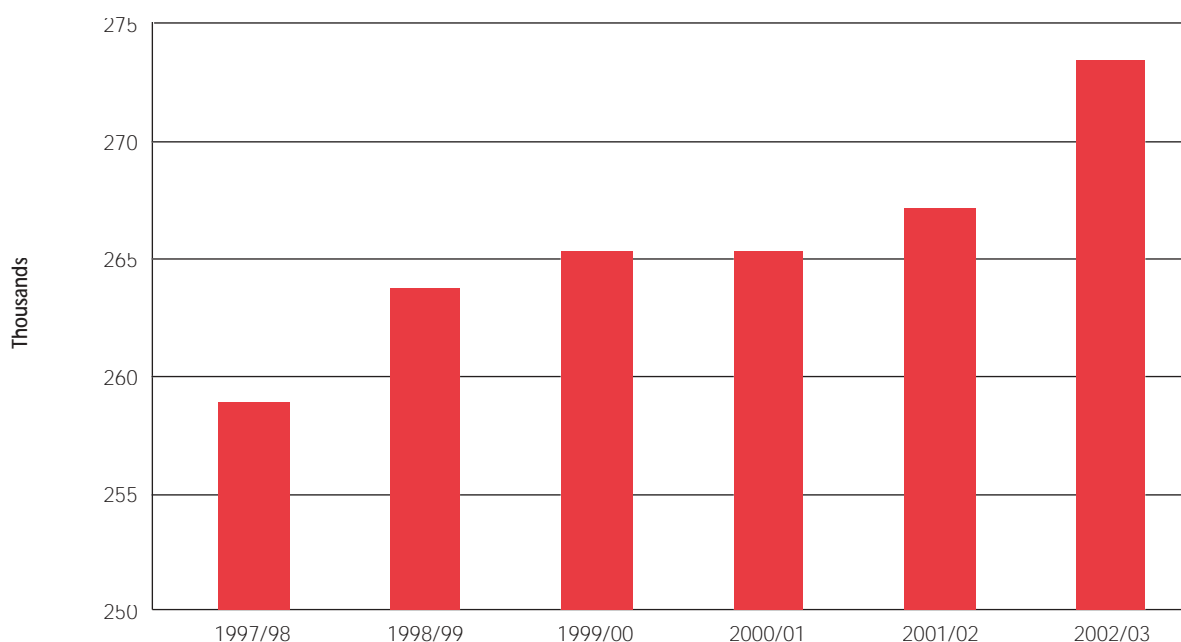
Academic Year	HE Initial Participation Rate (%)
1999/2000	41
2000/01	42
2001/02	43
2002/03 (provisional)	44

Sources: Calculated from HESA, LSC and ONS data.

Qualifiers

5.23 The growth in the number of students leaving HE with a first degree appeared to have reached a plateau at the turn of the decade (see Chart 34). However degree awards have now grown strongly in each of the last two years for which we have data: most strikingly in 2002/03 which shows a 5% growth on the previous year. With additional enrolments shown in Chart 33 above, we can anticipate a continuing growth in qualifications awarded in the near future.

Chart 34: Total number of first degrees awarded

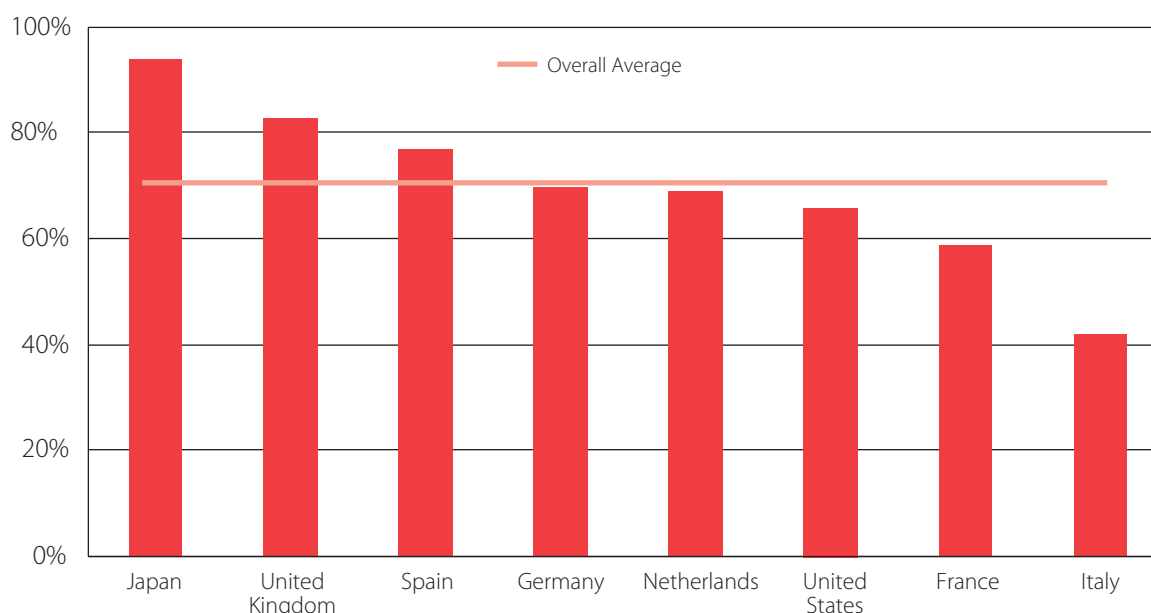


Source: HESA Statistical First Releases 61 and 70.

²⁹ The HEIPR is the initial participation rate for 17-30 year old English domiciled first time entrants to HE courses. The target is for 50% of the cohort to participate in HE by 2010.

5.24 By international standards, the UK has a relatively efficient higher education sector, so that our performance in producing graduates to meet demands for higher level skills is good. Chart 35 shows latest international data on graduation rates.

Chart 35: International comparison of graduation rates in higher education (2000)



Source: *Education at a Glance: OECD Indicators, OECD (2003)*

Foundation Degrees

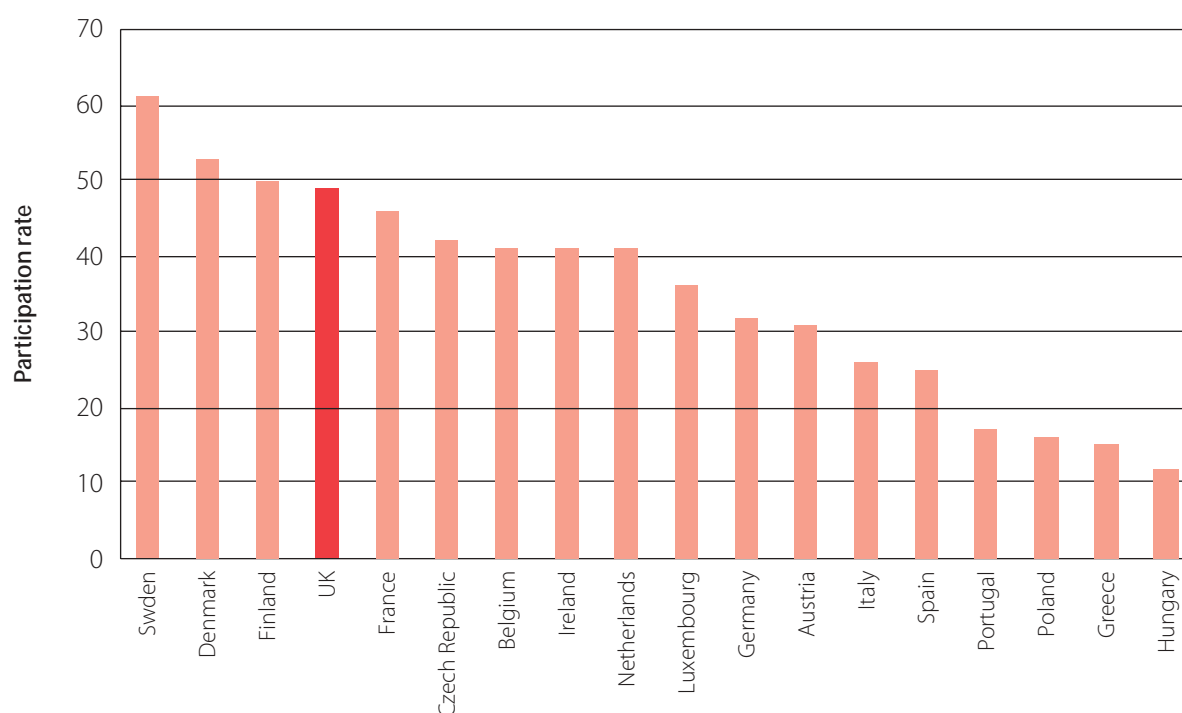
5.25 Foundation Degrees are still in their infancy but participation is growing rapidly. The range of occupational areas covered is widening, with courses ranging from Automotive Engineering to Veterinary Nursing, via E-Business and Multimedia Design amongst many others.

5.26 This year there are over 24,000 Foundation Degree students, just under half of them studying part-time. Recent figures from UCAS show that the number of applicants for full-time Foundation Degree places for next year is up by 50% on the same period last year. Large public sector employers such as the NHS and the armed forces, as well as private sector employers, are developing Foundation Degree programmes. Their distinguishing characteristic is that in all cases Foundation Degrees are vocationally oriented, and are designed and delivered in collaboration with employers.

ADULTS RECEIVING TRAINING

5.27 The latest National Employers Skills Survey³⁰ shows that three in five establishments provided training to an average of just over half of employees in the 12 months prior to the survey. International evidence suggests that the UK compares favourably with other countries in terms of the proportion of employers providing training (see Chart 36).

30 *National Employers Skills Survey 2003*; Hogarth et al (forthcoming)

Chart 36: Participation in employer sponsored continuing vocational training

Source: CVTS2 – OECD Employment Outlook (2004)

5.28 The better qualified are significantly more likely to receive training from their employer than those with low levels of qualification – someone with a degree is nearly 5 times more likely to receive training than someone with no qualifications.³¹

5.29 Other issues about the training provided by employers are that:

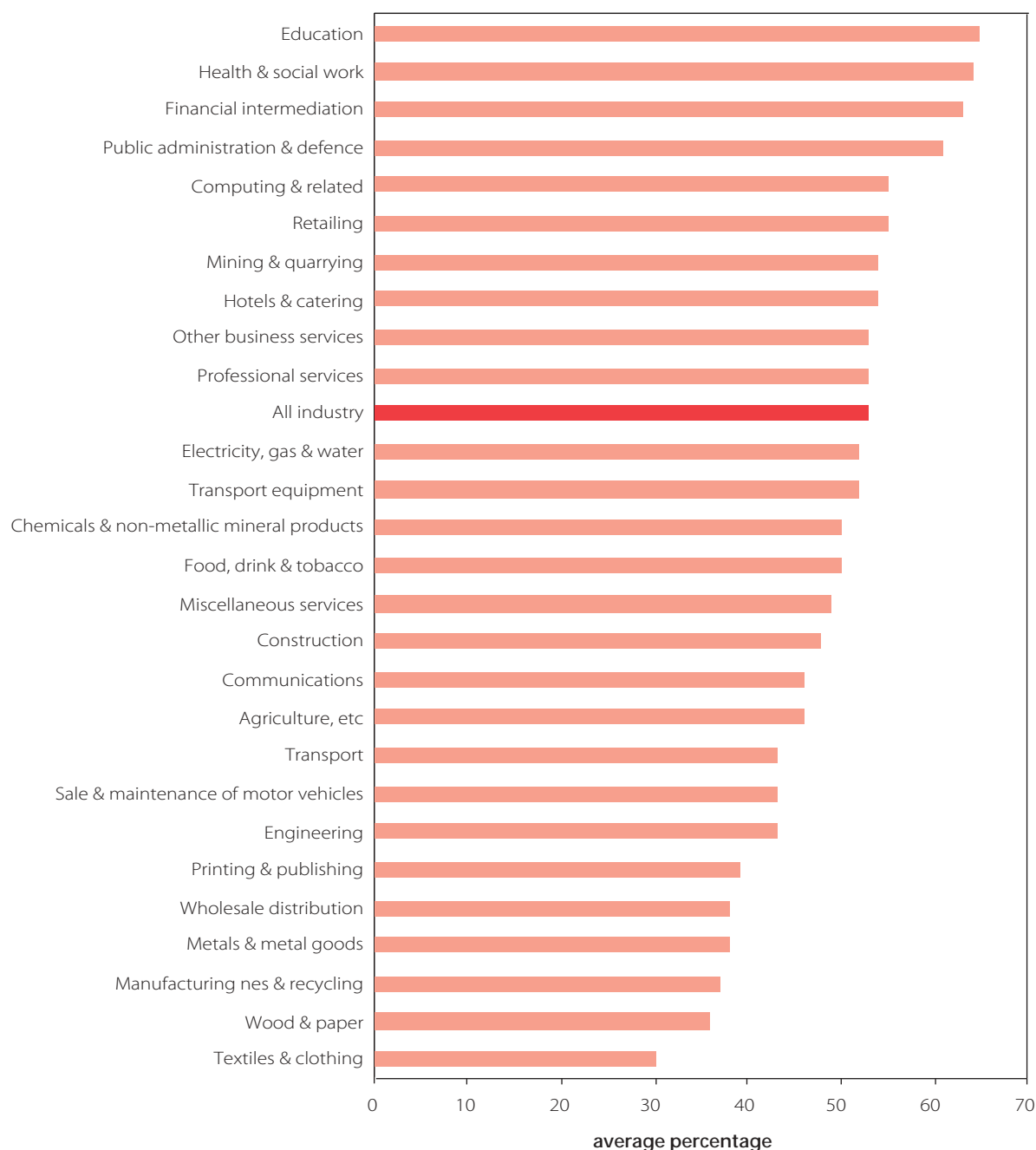
- large establishments are more likely to provide training than small ones – 97% of establishments employing over 500 people provide training compared to 50% of those employing fewer than 5 people.³² However, it is argued that much of the informal learning more prevalent in the smallest establishments is not captured in these figures;
- while the most common type of training is job specific – suggesting it is well tailored to the needs of the business – much involves health and safety and induction training;³³ and
- There are significant sectoral variations with firms in the public sector, engineering, utilities and finance being much more likely to provide training than those in textiles, printing and retailing (see Chart 37).

31 According to the LFS, Winter 2003 22% of those holding a degree and equivalent or above received job-related training in the four weeks before being surveyed compared to 5% of those with no qualifications.

32 *National Employers Skills Survey 2003*; Hogarth et al (forthcoming)

33 *National Employers Skills Survey 2003*; Hogarth et al (forthcoming) shows that 80% of establishments provided job-specific training while 69% provided health and safety training and 51% induction training.

Chart 37: Percentage of employees in receipt of training over last 12 months by industry



Source: National Employers Skills Survey 2003; Hogarth et al (forthcoming)

5.30 There is a significant relationship between one of the expected outcomes of training – namely, qualification levels – and earnings³⁴. Higher levels of qualification attract higher earnings though vocational qualifications (VQs) tend to provide lower wage returns than their academic counterparts and some low level VQs appear on average to bestow no earnings gain. These are the qualifications more likely to be gained by adults in training. Table 2 below shows the broad picture in terms of earnings return by qualification type and level.

34 See for example, *The Returns to Academic, Vocational and Basic Skills in Britain*, STF paper 20 – Dearden et al, DfES 2000.

Table 2: Wage premium (%) from obtaining qualifications

	NVQ Level	Men	Women
Academic Qualifications			
O level/higher GCSEs	2	21	19
A level	3	17	19
First Degree	4	28	25
Vocational Qualification			
Level 1-2 NVQs	1-2	ns	Ns
Level 3-5 NVQs	3-5	6	5
ONC/OND or TEC/BEC national	3	10	8
HNC/HND or TEC/BEC higher	4	15	9
Professional qualifications	5	35	41

(Source: Table 6.31, Dearden et al. (2000); ns = not statistically significant)

- 5.31** Importantly, higher returns to low level VQs can be found under certain circumstances. Forthcoming work by the Centre for Economics of Education³⁵ finds positive returns to certain sectors (e.g. health care) where the qualifications are more recognised; NVQ2s delivered through the workplace provide a positive return, and having an NVQ2 increases the likelihood of an individual reinvesting in their education to gain a level 3 qualification. Specifically those:
- women who work in the “public administration, education and health” sector gain an 8% return to their NVQ2 compared to an individual with no qualification;
 - men who work as “plant and machine operatives” gain a 6.5% return to their NVQ2 if they previously had no other qualifications. In addition, men in these jobs receive a 5% return to their NVQ2 over and above the gain to any level 1 qualification they have;
 - adults who undertake their NVQ2 through workplace learning gain a 6-7% return compared to an individual with no qualifications; and
 - adults with a NVQ2 qualification are 3% more likely than those without an NVQ2 to gain a level 3 qualification.
- 5.32** This reinforces the importance of attending to the design and delivery of vocational training, to ensure it has a positive impact.

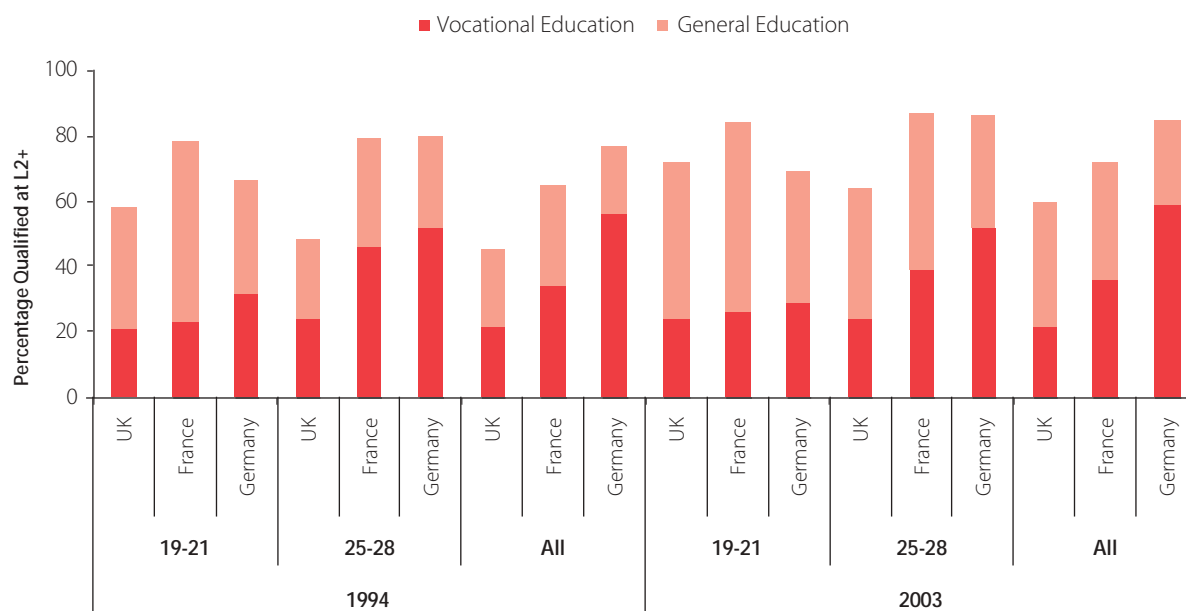
INTERNATIONAL COMPARISONS

- 5.33** The latest figures comparing UK qualification levels with those in France and Germany show that at level 2 we have been catching up (see Chart 38). In 1994 someone in the UK workforce was 58% as likely as one in the German workforce to hold a level 2; by 2003 that likelihood had increased to 70%.

³⁵ *An In-depth Analysis of the Returns to National Vocational Qualifications Obtained at Level 2*, Dearden et al, CEE 2004 (forthcoming).

5.34 This catching up applies to all ages and indeed for the youngest age group (19-21 year olds) the UK now outperforms Germany – though this is likely to be due to the later age at which young people acquire qualifications in Germany. But there remains a significant gap.

Chart 38: Proportion qualified at level 2+ by year, age, country and type of education



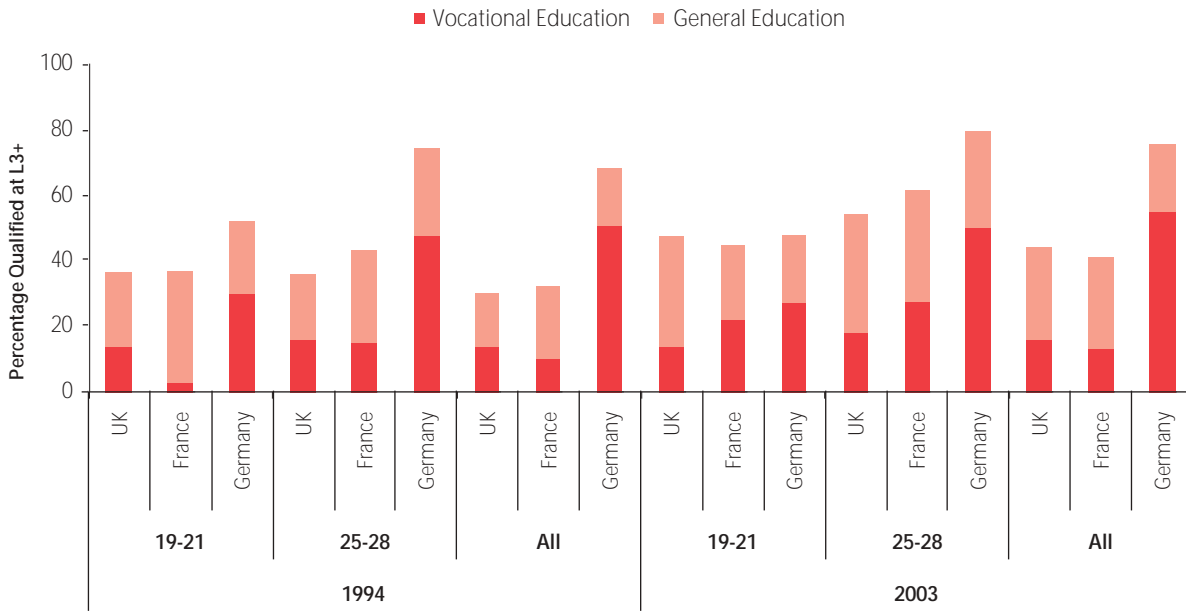
Source: *International Comparisons of Qualifications: Skills Audit Update*; H. Steedman, S. McIntosh and A. Green. (2004)

5.35 At level 3 a similar picture emerges of relative improvements in overall qualification levels in the UK, but with most of that progress represented by academic rather than vocational qualifications (see Chart 39). While France fares little better than the UK at this level, when compared to Germany someone in the UK workforce is only one-quarter as likely to hold a vocational level 3 qualification.

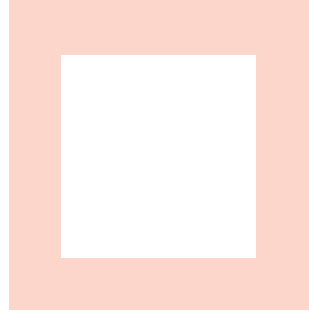
5.36 The overall picture is therefore one of the UK catching up our international competitors in qualification levels of young people and the workforce. This is particularly true for general education qualifications. There has been little improvement in the UK position on vocational qualifications, but the increase in generic skills that has accompanied the increase in general education qualifications should provide employers with a better base on which to build higher levels of vocational skill in the future³⁶.

36 *International Comparisons of Qualifications: Skills Audit Update*; H. Steedman, S. McIntosh and A. Green. (2004)

Chart 39: Proportion qualified at level 3+ by year, age, country and type of education



Source: *International Comparisons of Qualifications: Skills Audit Update*; H. Steedman, S. McIntosh and A. Green. (2004)

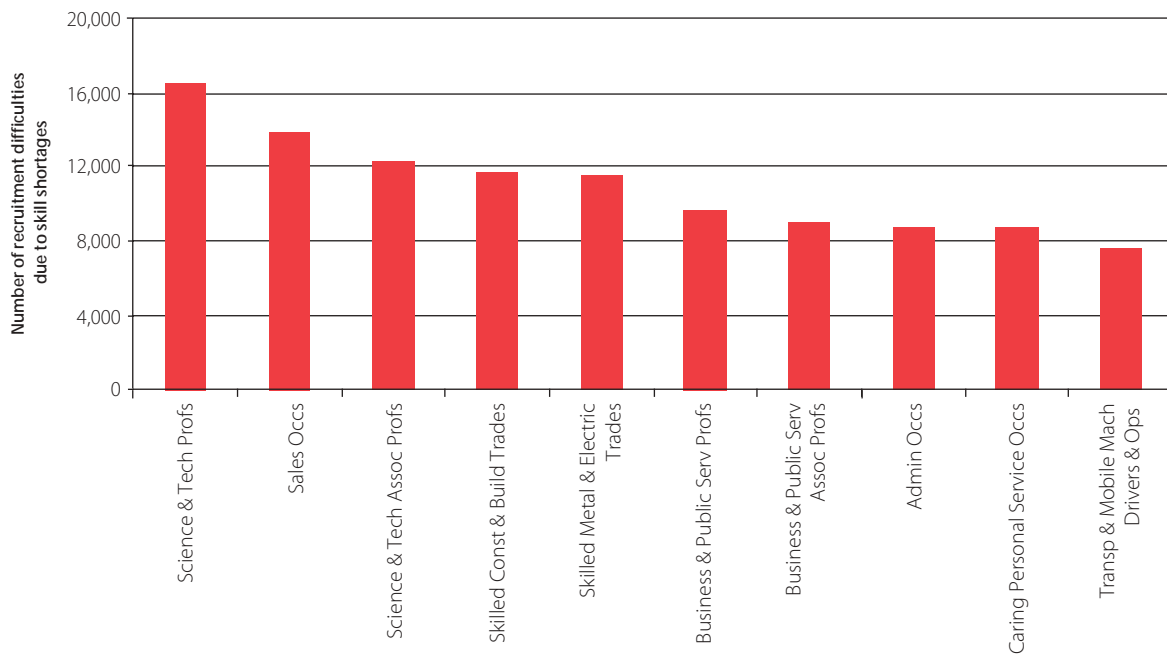


SECTION 6:

Skill Supply/ Demand Balance

ARE WE MEETING THE CURRENT DEMAND FOR SKILLS?

- 6.1 One way of measuring this is the extent to which employers in different sectors can recruit the people they are looking for.
- 6.2 The main occupations where skill problems cause recruitment difficulties are quite volatile for reasons that are not clear. As shown in Chart 40, in 2001 the main occupations were:
- engineers, scientists and IT specialists at both the professional and technician level; and related technical skills at craft level, particularly in the construction sector and engineering;
 - business service jobs such as accountants, consultants and IT specialists; and
 - lower level service jobs in sales and care.

Chart 40: Top 10 occupations with recruitment difficulties due to skill shortages (2001)

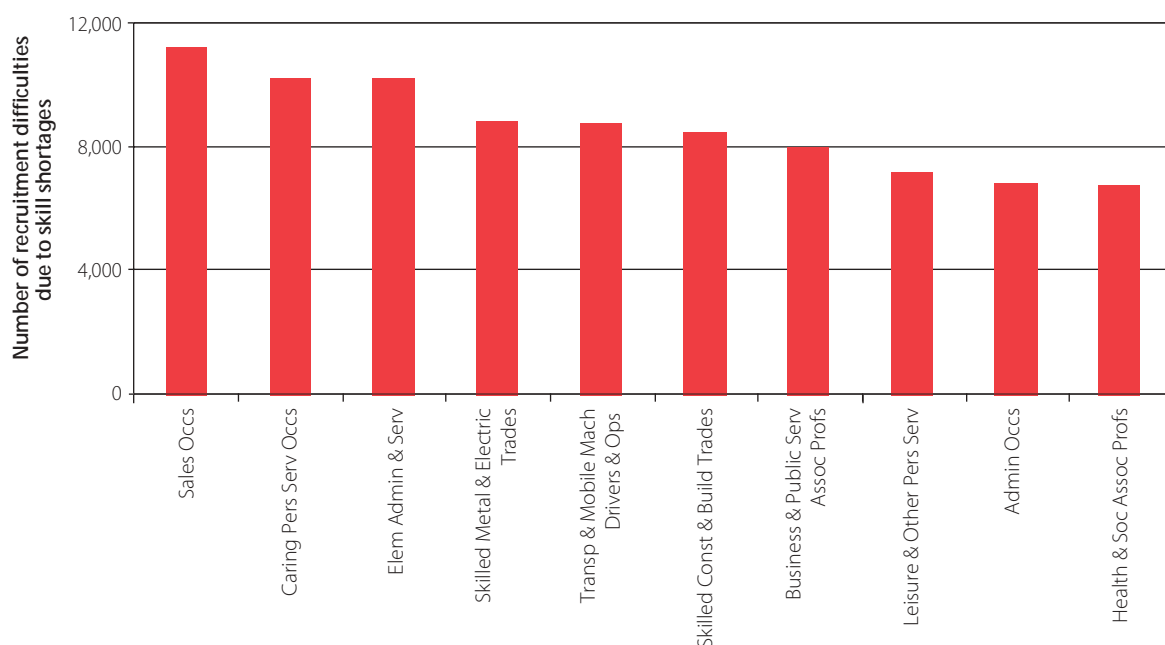
Source: National Employers Skills Survey 2001

6.3 As shown in Chart 41, in 2003 they were:

- **low level service jobs** – in sales and care, but also administration and transport;
- **Skilled craft jobs** – in engineering and construction; and
- **Health associate Professionals** – nurses.

6.4 The problems with sales and care and skilled craft jobs are common to both years. However, it is less clear why other lower level jobs should be causing such skill problems, unless it is reflecting the state of the labour market in London and the South East. The reduction in problems at associate professional level (other than health) may reflect an easing of the ICT skills problem.

Chart 41: Top 10 occupations with recruitment difficulties due to skill shortages (2003)



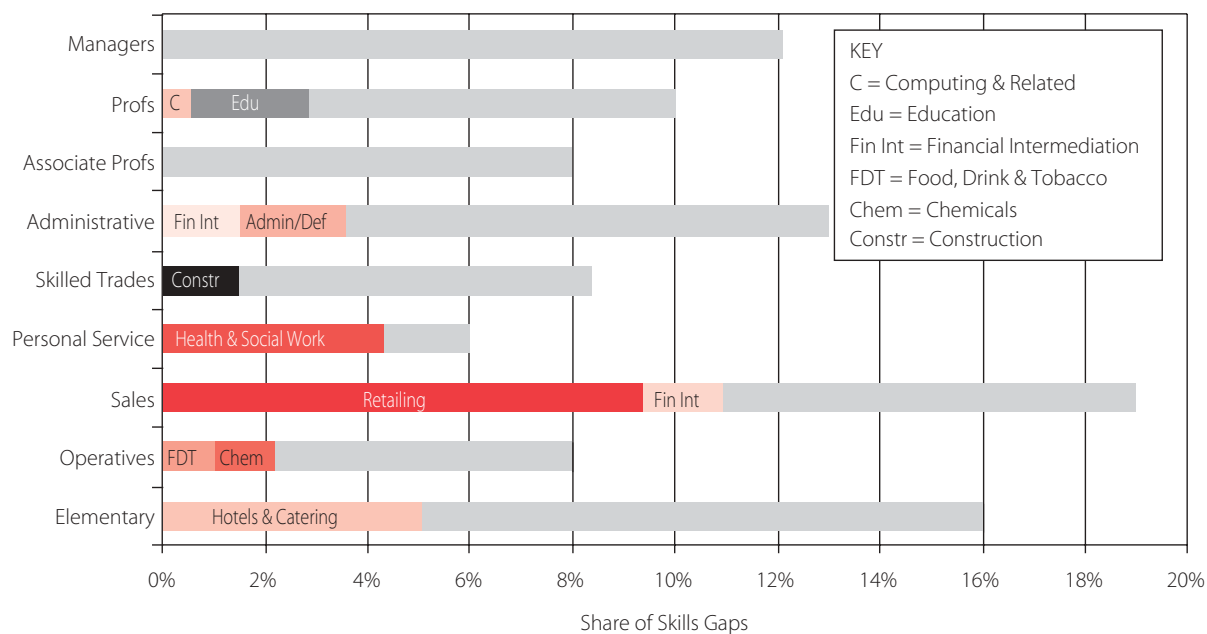
Source: National Employers Skills Survey 2003

IS THE CURRENT WORKFORCE PROPERLY EQUIPPED WITH THE SKILLS THEY NEED?

- 6.5 For skill supply and demand to be in balance, employers should not only be able to recruit new employees with the skills they need, but also be able to address skill deficiencies amongst their existing employees. These are referred to as “skills gaps”. Where such gaps exist these will add to the skill needs of the economy that arise from future job growth or changes in the mix of jobs available.
- 6.6 The scale of skill gaps amongst existing employees is rated by employers in the National Employers Skill Survey (NESS)³⁷ as being a significantly bigger problem than that related to a lack of skilled applicants applying for vacant jobs (known as “skills shortages”). The NESS suggests that some 2.4 million existing staff are seen by their employers as not having the skills needed to perform their jobs fully satisfactorily, compared with 135,000 vacancies which are hard to fill with candidates with the right skills.
- 6.7 Information on skill gaps is not available at the same level of detail as that on skill shortages. It is possible to look at gaps at a more general level in relation to the sectors where they are prevalent to build up a picture. As is illustrated in Chart 42, in 2003 the main problems lay in:
- sales – 19% of all skill gaps – 50% of these gaps are in the retailing sector (sales assistants), with particular gaps in communication and customer handling skills;
 - elementary jobs – 16% of all skill gaps – one-third of these gaps are in hotel and catering (waiters/waitresses), with similar problems in communication and customer service;

37 National Employers Skills Survey 2003; Hogarth et al (forthcoming)

- administrative jobs – 13% of skill gaps – mainly in business and public service jobs, with gaps in a range of generic skills; and
- managers – 12% of skill gaps – spread around the labour market but with a concentration in retail and business services.

Chart 42: Distribution of skill gaps by occupation, 2003

Source: National Employers Skills Survey 2003

ANALYSIS OF TRENDS IN EARNINGS

- 6.8 To the extent that earnings reflect the relative scarcity of skills we would expect mismatches in skill supply and demand to be reflected in widening pay differentials for jobs. Table 3 examines trends in earnings over the last 20 years. Changes between the three periods shown must be treated with caution, given that the occupational classifications underlying the data for each time period are different.³⁸
- 6.9 The largest growth in earnings premium relative to those jobs that require only basic skills³⁹ has been seen in:
- Corporate Managers – 57% increase between 1981-83 and 2001-03;
 - Health associate professionals – 47% increase over the period;
 - Health professionals – 46%; and
 - Business and public service (other) professionals – 43%.

38 Data for 1981-83 and 1991-93 have been taken from the New Earnings Survey. In 1981-83, occupations were coded to the Key List of Occupations for Statistical Purposes (KOS). An approximation to the classification used in 1991-93 (SOC 90) has been made. Data for 2001-03 are taken from the Labour Force Survey and are coded to SOC 2000.

39 Defined as knowledge of relevant regulations associated with jobs classified as elementary occupations (e.g. health and safety, food hygiene), together with requirements of basic literacy and numeracy

6.10 Business and public service associate professionals enjoy a large pay premium relative to the reference group in 2001-03 though the lack of comparability of this group to earlier occupational classification makes it difficult to comment on trends over time. It is also clear from the table that there has been low or even negative real growth in earnings amongst those with the least skill.

Table 3: Changes in the relative gross weekly earnings of full-time employees, by Soc sub-major groups, 1981-83, 1991-93 and 2001-03

Skill level	Sub-major groups of SOC90		Sub-major groups of SOC2000		
		1981-83	1991-93		2001-03
Level 4	Corporate managers and administrators	1.81	2.22	Corporate managers	2.84
	Science and engineering professionals	1.80	2.05	Science and technology professionals	2.45
	Health professionals	2.39	2.92	Health professionals	3.49
	Teaching professionals	1.77	1.89	Teaching and research professionals	2.35
	Other professional occupations	1.75	2.01	Business and public service professionals	2.51
Level 3	Managers/proprietors in agriculture and services	1.21	1.41	Managers and proprietors in agriculture and services	1.74
	Science and engineering associate professionals	1.48	1.62	Science and technology associate professionals	1.69
	Health associate professionals	1.11	1.37	Health and social welfare associate professionals	1.63
	Protective service occupations	1.58	1.61	Protective service occupations	1.95
	Other associate professional occupations	1.63	1.84	Culture, media and sports occupations	1.89
	Buyers, brokers and sales representatives	1.42	1.55	Business and public service associate professionals	2.07
	Other occupations in agriculture, forestry and fishing	0.92	0.93	Skilled agricultural trades	1.09
	Skilled engineering trades	1.30	1.45	Skilled metal and electrical trades	1.56
	Skilled construction trades	1.11	1.15	Skilled construction and building trades	1.41
	Other skilled trades	1.09	1.12	Textiles, printing and other skilled trades	1.15

level		1981–83	1991–93		2001–03
Level 2	Clerical occupations	0.94	1.03	Administrative occupations	1.24
	Secretarial occupations	0.90	1.03	Secretarial and related occupations	1.21
	Personal service occupations	0.86	0.85	Caring personal service occupations	0.95
				Leisure and other personal service occupations	0.99
	Other sales occupations	0.76	0.79	Sales occupations	1.03
				Customer service occupations	1.16
	Industrial plant and machine operatives, assemblers	1.08	1.13	Process, plant and routine operatives	1.27
Drivers and mobile machine	1.26	1.23	Transport and mobile machine operators drivers and operatives	1.34	
Level 1	Other elementary occupations	1.00	1.00	Elementary trades, plant and storage related occupations	1.00
				Elementary administrative and service occupations	

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