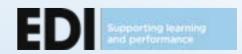


# Building for growth: business priorities for education and skills

**Education and skills survey 2011** 



Survey sponsored by



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# Foreword by John Cridland, CBI



Business is on the mend – and skills is a key driver. Our survey shows grounds for optimism. Employers are looking to increase their investment in training and development, recognising the importance of skills to unlocking business opportunities.

Apprenticeships are part of the skills jigsaw, over half of employers were delivering apprenticeship training and our survey highlights the importance of ongoing work to get even more employers on board.

The bar is being raised on skills, with businesses increasingly wanting people with abilities at a higher level. There is also growing demand for science, technology, engineering and maths skills (STEM), particularly in high value sectors such as low carbon, pharmaceuticals and digital media. But over forty percent of employers in the survey are having difficulties recruiting STEM skilled staff.

With the decline in the number of low-skilled jobs, there are now fewer low-level entry points into the labour market for the unemployed or those with poor educational achievement. And with over 930,000 16-24 year-olds currently inactive, the danger is stark.

As a nation we are still letting far too many fall behind. Almost half of employers report problems with literacy and numeracy skills in the workforce – and worryingly this trend has increased over the last four years of our survey. At the same time, businesses' top priority for schools and universities is the development of employability – the fundamental attributes of teamworking, self-management and problem-solving.

Employers are not just carping from the sidelines – they are getting involved with schools to support the development of these basic skills. Two thirds of employers in our survey had built links with secondary schools, with many providing work experience opportunities for young people. Business activities with schools have increased by a third in the last year.

In total, this year's survey results start to provide us with a route-map to achieving our goal of growth.

John Chalamal

John Cridland

CBI director-general

# Foreword by Nigel Snook, EDI



Since the publication of last year's CBI/EDI education and skills survey, there has been a significant response from both employers and the government to the challenge of developing the labour force skills which are central to the long-term success of individual businesses and the economy as a whole.

This year's survey confirms the growing value that employers place on work-based apprenticeship programmes with an increase in both those already offering apprenticeships and those planning to do so. This has been matched by government investment in and promotion of apprenticeships as the flagship vocational route for all ages but particularly for those under the age of 25.

The development of apprenticeships over the past few years has gone a good way to addressing the parity of esteem debate that has overshadowed vocational education for so long. But there is still more to do. Employers are making a significant contribution but more apprenticeship places are needed along with greater engagement with schools and colleges to provide practical work experience opportunities. To encourage this, we would urge the government to push ahead with simplifying the apprenticeship system by addressing the bureaucracy surrounding eligibility and funding.

A key component for the future success of the apprenticeship programme is the need for young people and adults alike to have access to expert advice and guidance on the wider training and employment opportunities available to them. The government's recent announcement of the creation of a National Careers Service is a welcome move to strengthen this important area.

With increasing numbers of young people not in education, employment or training and many seeking a change in employment, this new service should have a central role in providing the information and support necessary for them to make informed decisions about opportunities to develop their skills to match the demands of a changing labour market.

This year's survey again highlights the concerns of employers in relation to the low level of numeracy, literacy and employability skills of many school and college leavers. Remedial work-based training can make an important contribution to addressing these shortcomings but the resources allocated to this could be far better utilised in providing employment-related preparatory training. Professor Alison Wolf's recent review into 14-19 vocational education compliments many of the vocational programmes for those aged over 16 but there continues to be a need for more appropriate preparation for 14 to 16 year-olds who hope to enter the world of work by undertaking an apprenticeship. Just as GCSEs provide a progression route to 'A' levels and higher education, vocational education programmes should be a preparation for an apprenticeship programme and include the basic skills that are so important to making a strong start in working life.

The economic imperative to raise the skills base of the nation is recognised by all concerned. The development of an even stronger strategic partnership between employers and government, which recognises the realities of delivering high-quality training in the workplace, is essential if further progress is to be made.

Nigel Snook

EDI chief executive

# 1 **Executive summary**

#### Respondents

- The survey was conducted in February 2011.
- Responses were received from 566 employers, collectively employing 2.2 million people
- Respondents came from businesses of all sizes and sectors across the UK
- The survey was completed by senior executives. In small and medium-sized companies, this tended to be the managing director, chief executive or chairman. In larger firms, it was the human resources director or equivalent.

#### **Employers investing in skills**

- Over two fifths (41%) of firms plan to increase their investment in training
- Over half (55%) of employers are involved in apprenticeships, with almost a fifth (17%) planning to become involved in the next few years
- A third (33%) of employers believe cutting back on bureaucracy would encourage them to become more involved in apprenticeships.

### Skilling employees for sustainable growth

- Over two thirds of employers (70%) want to see the development of employability skills among young people at school and college made a top priority – this does not require a new qualification but rather embedding the skills in the curriculum, as the best schools and colleges already do
- Two thirds of employers (65%) also see a pressing need to raise standards of literacy and numeracy amongst 14-19 year-olds
- A similar proportion (70%) want to see university students doing more to prepare themselves to be effective in the workplace
- Over half (56%) of employers want more action to reduce the red tape around publicly-funded training.

### Getting the basics right for working life

- Many young people are still leaving school and college with serious shortfalls in their employability skills. Over half of employers (55%) experience weaknesses in school leavers' selfmanagement skills and two thirds (69%) believe they have inadequate business and customer awareness
- Levels of employer satisfaction with the employability skills of graduates are higher than for school and college leavers, but there are still alarming weaknesses in skills around teamworking (20%) and problem-solving (19%)
- Employers report widespread weaknesses in core workplace skills among their existing employees – with almost half reporting problems with literacy and numeracy
- To tackle the basic skills shortfalls across the workforce, around two fifths of employers are providing remedial training to school and college leavers.

#### Skills for competitiveness

- Most employers consider skill levels among their employees to be satisfactory for their current activities, with two thirds (66%) rating their high-skilled employees as good
- Far more businesses (71%) expect to increase the number of jobs requiring leadership and management skills than expect a reduction (6%) – a balance of 65%. Employers also expect to increase their demand for higher-skilled employees (+58%)
- More employers (28%) expect to decrease the number of low-skilled employees in their workforces in the next few years than expected to increase it (23%)
- While most employers (75%) are confident there will be enough people available to fill their low-skilled vacancies in future, a majority (52%) are not confident of meeting their need for highskilled employees.

### **Employers supporting education**

- Engagement with secondary schools is a clear priority for employers, with two thirds having built links (67%)
- Employers are stepping up their commitments, with over a third (36%) having increased their school engagement activity over the last year
- Business involvement goes beyond simply providing work experience for pupils – nearly half of employers (48%) support careers advice and more than one in four (28%) provide school governors
- There is an appetite from employers to play a greater role in delivering careers advice more than half (54%) would be willing to do more, rising to two thirds (66%) of large firms.

### Meeting the need for STEM skills

- STEM skills shortages are widespread 43% of employers currently have difficulty recruiting staff, rising to more than half of employers (52%) expecting difficulty in the next three years
- The government must tackle shortages by promoting science and maths in schools (62%) and supporting STEM-related apprenticeship programmes (54%) – the CBI is ready to help on both fronts
- STEM qualifications alone aren't enough many employers find that applicants lack employability skills (36%) and workplace experience (37%)
- Business understands it has a key role to play many employers offer STEM-related work experience (31%) and engage with schools to promote STEM subjects (28%).

### Businesses and universities in the new era

- One in five jobs (20%) now requires a degree rising to 70% in professional services
- Business has a strong preference for STEM degrees they are favoured by 41% of all employers
- Employability skills are the most important factor taken into account when businesses recruit graduates – four in five employers (82%) value these skills
- 80% of all employers now have links with universities or plan to build them in the future.

#### **Building a responsive skills system**

- Two thirds (64%) of employers believed apprenticeships should be the priority for government funding
- Only a third (33%) of the training employers provide to staff leads to government-recognised qualifications
- Almost nine in ten (89%) of organisations use external providers, but providers must become more responsive to business needs.

### **Talking business**

- Only a quarter (27%) of businesses say they have no need for foreign language skills among their employees
- Language skills are particularly important in sectors such as manufacturing and banking, finance and insurance, reflecting the globalisation of organisations
- The greatest demand is for a level of language skills that can help in building relations with overseas contacts
- The major European languages are still those in greatest demand, but there are also widespread requirements for languages to help business in the major emerging economies.

# 2 The skills landscape

The latest CBI/EDI education and skills survey is published at a time when economic recovery remains fragile and an extended squeeze on public spending lies ahead to tackle the budget deficit. In this challenging environment, investing in skills has never been more important. In the short term, increased workforce skills will boost competitiveness, help firms generate export-led growth and assist the unemployed back into work. Looking to the longer term, widening and deepening the pool of skills is essential for the UK to maintain its place in the global marketplace.

### **Economic recovery remains slow**

The UK's economic outlook remains relatively subdued. After four quarters of successive growth, the economy contracted by 0.5% in the last quarter of 2010. Although most of the decline in activity was attributed to December's bad weather, the ONS estimates that in the absence of the disruption the growth rate would have been broadly flat, suggesting the underlying rate of growth was weaker than previously thought.

The CBI is now forecasting economic growth of 1.8% in 2011<sup>1</sup>, picking up slightly to 2.3% in 2012. But this remains below the economy's long-term average growth rate, and while the UK remains on the road to recovery, the pace is expected to be sluggish. With household spending under considerable strain and fiscal austerity measures starting to bite, the UK is looking to business investment and exports to deliver economic growth over the coming two years. Encouragingly the CBI is forecasting that business investment will grow by 9.2% in 2011.

Unemployment continues to rise and has now reached 2.5 million<sup>2</sup>. The CBI has predicted it will peak at 2.7 million by the end of 2011 before slowly starting to fall.

The spotlight is shifting towards the private sector to boost employment. The government's Office for Budget Responsibility has forecast 400,000 public sector job losses by 2015-16<sup>3</sup>, but is expecting a net rise in employment, with the private sector creating 1.3 million jobs over the period.

#### Skills will be a driver of growth and job creation

Business growth depends on a range of factors, but having people with economically valuable skills will give firms a competitive edge. Employers understand the importance of developing the skills of their workforce. Last year's education and skills survey found 99% of firms saw skills as important or very important to achieving their strategic objectives.

The experience of the recession demonstrated the premium employers place on skilled staff. While unemployment has inevitably increased, businesses worked hard to retain valued

talent. Output fell by 6.5% during the recession, but employment declined by only 2%. This contrasts with the recession of the early 1980s, when the economy contracted by 4.7% but the fall in employment of 2.4% was proportionately much greater.

At the same time, it has never been more important for everyone in the workforce to have a minimum level of skills in order to secure employment. While there are currently half a million vacancies in the economy, there is a need to better match the skills of the unemployed with jobs which are available. It is notable that of the 210,000 jobs created in 2010, 80% were taken by people born outside the UK<sup>4</sup>, with firms often looking beyond the domestic workforce to fill vacancies.

While many employers will be looking for specific technical skills or experience to fill their roles, all employers now need people with a strong grasp of the basics – literacy, numeracy and employability skills. But as this survey shows employer concerns over literacy and numeracy among the workforce has increased in recent years (see Chapter 6).

#### Skills required for employment

Given the importance of skills, 83% of business leaders in PricewaterhouseCooper's recent global CEO survey<sup>5</sup> say they are prioritising talent management over the next year. At the same time, two thirds of CEOs believe they're facing a limited supply of candidates with the right skills and the UK is no exception. To achieve growth in the short and longer term, it is essential employers have access to a pool of talent with the skills their business needs to thrive.

Forecasts for UK employment show demand to fill jobs in more highly skilled occupations is growing. Of the 13.5 million jobs that will need to be filled by 2017, over half will be for managers, professionals and associate professionals and technical occupations<sup>6</sup> (Exhibit 1). In addition, the Bank of England reports that almost all (90%) of the employment growth during the recent decade of economic prosperity was for people with degree-level qualifications.<sup>7</sup> To address this challenge, the UK will need to

Exhibit 1 Total jobs to be filled by occupation, 2007-17 (million)				
Occupation	Expansion demand + replacement demand			
Managers and senior officials	2.64			
Professional occupations	2.17			
Associate professional and technical	2.21			
Administrative and secretarial	1.15			
Skilled trades occupations	0.89			
Personal service occupations	1.45			
Sales and customer service	0.96			
Machine and transport operatives	0.7			
Elementary roles	1.28			
Total	13.5 million			

develop its technical and managerial capabilities at intermediate and higher levels.

As this report shows, businesses continue to report shortages of people with science, technology, engineering and maths (STEM) skills (see Chapter 9). These are increasingly required in high value sectors which will be key to long-term economic success, including advanced manufacturing, pharmaceuticals and creative industries.

While there will always be a persistent number of low-skilled jobs in the economy, overall numbers have declined. The increase in demand for people to fill elementary roles such as cleaning or security services, is attributable to replacing those retiring or leaving the workforce – it is not the creation of new jobs.

Traditionally lower skilled jobs have served as labour market entry points for many moving out of unemployment, and their decline emphasises the need for everyone to have a strong platform of basic skills.

Failure to grasp these basics when young will affect future life-chances and increase the likelihood of becoming NEET (not in education, employment or training). Over 930,000 16-24 year-olds

are currently NEET<sup>8</sup> and while this is not a homogenous group, many will suffer from educational under-achievement.

The costs of failure are high. The Audit Commission estimates that the current population of 16-18 year-olds not in education, employment or training will cost the taxpayer £13bn over their lifetime (through welfare payments, costs to health and criminal justice services etc), plus a further £22bn in opportunity costs (loss to the economy, welfare loss to individuals and their families).

### Getting the basics right at school

As schools are the first step on the educational ladder, it is important that young people develop a strong grasp of the basics. The UK continues to have a long tail of underachievement on basic skills, and this must be tackled for the benefit of business and individuals.

While some progress has been made in improving literacy and numeracy results at age 16 in recent years, far too many young people still fail to make the grade. Last year 58% of entrants achieved A\*-C in GCSE maths and 65% English (Exhibit 2).

But this meant over 300,000 young people did not achieve the benchmark of a grade C in maths, with 250,000 falling below this level in English. Worryingly, almost 100,000 young people received a grade F or below in maths and 50,000 in English. These young

Exhibit 2 Those achieving A\*-C in maths and English GCSE, 2005-2010 (%)

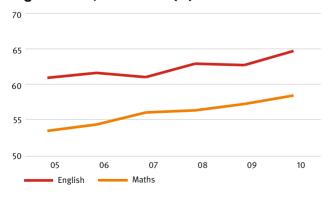


Exhibit 3 UK rankings in OECD PISA tests					
Year	Science	Reading	Maths	Number of participating countries	
2000	4th	7th	8th	32	
2006	14th	17th	24th	57	

28th

65

people will join the already swelling ranks of those leaving school ill-equipped to deal with a labour market where the baseline of skills required for employment continues to rise.

25th

2009

16th

OECD data shows secondary school pupils in the UK are falling behind our competitors on maths, reading and science. The latest OECD PISA survey, based on tests taken by 15 year-olds, shows the UK has dropped in international rankings. In 2009 UK pupils ranked 16th in science, 25th in reading and 28th in maths (Exhibit 3).

The numbers going on to take A-level maths increased in 2009/10 but the UK still lags behind international competitors on this front, with England, Wales and Northern Ireland ranking bottom in a recent study of post-16 maths uptake by the Nuffield Foundation.<sup>10</sup>

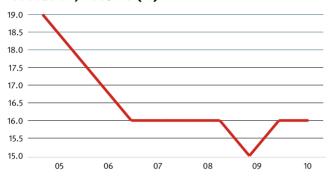
Taking the three separate sciences at GCSE is the best preparation for studying science subjects at a higher level. But less than 20% of students take the three separate sciences, falling to just 3.9% of those who qualify for free school meals.

### **Building a flow of high-quality graduates**

The UK's universities continue to provide business with a flow of high-quality graduate and post-graduate talent: there are now almost 2.5 million students enrolled in higher education and a record 716,000 graduated in 2010 – a 12% increase since 2006.

The effect of changes to fees and funding arrangements for higher education is yet to be felt, but maintaining the number of graduates in STEM subjects will be crucial to the ability of businesses to spearhead economic growth. The last decade has seen a decline in the proportion of students taking STEM degrees – turning this trend around must be a priority (Exhibit 4).

Exhibit 4 Decline of STEM study in higher education, 2005-10 (%)



#### **Investing in workforce skills**

Employers recognise the value of skills and invest £39bn a year in training their staff. This included 109 million days of training covering 12.8 million workers in 2009.

The National Employer Skills Survey for England found the majority of employers (68%) were providing training to their staff. But these official figures underestimate the extent of training activity as they do not capture the significant amount of informal learning that takes place in the workplace, particularly in SMEs.

Levels of training activity in the UK compare well against our international competitors. Eurostat found that 90% of UK employers provide training – the highest proportion in the EU and far above the EU average of 60%.<sup>11</sup>

Employers will choose the training method that best suits their business and their employees – whether accredited or unaccredited learning, delivered internally or externally. An increasing number of firms are offering government-recognised apprenticeships, reflecting the value apprenticeships can deliver for employers and apprentices.

Securing more high-quality and employer-led apprenticeship places will help raise skills levels and drive private sector growth. Apprenticeship programmes give people the practical skills they

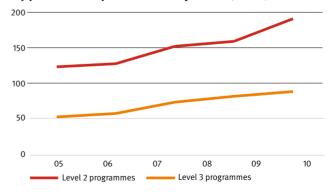
need to secure employment and increase business productivity. Over 80% of employers believe that apprenticeships have helped raise the overall productivity of their organisation<sup>12</sup>, with 90% of apprentices finding employment (or self-employment) immediately after their training ends.<sup>13</sup>

Almost 280,000 people started a government recognised apprenticeship last year, an increase of 17%. This continues a trend in the growth of apprenticeship provision, with the number of annual starts rising by 100,000 since 2006.

The government is increasing support for apprenticeships, and considers them as the main vocational route for developing skills within the workforce. Ministers have said they want to work with employers to deliver an additional 100,000 apprenticeships by 2014, supported by public funding of £1.4bn next year.

With the UK needing to develop intermediate-level skills in technical and managerial disciplines, it is encouraging that there has been an increase in people starting Level 3 apprenticeship programmes (**Exhibit 5**), and that ministers want to encourage progression in apprenticeship training. Level 3 starts have increased by almost 70% since 2006.

Exhibit 5 Numbers starting government-funded apprenticeships scheme, by level (000s)



# 3 Respondents

The CBI/EDI education and skills survey provides an authoritative barometer of business opinion on key education and skills issues. Having the right base of skills within the workforce will be essential to supporting economic recovery, and our survey sets out the current extent of business activity on training – as well as where we currently stand on building the key skills on which growth will depend in the short and longer term.

The survey was conducted in February 2011, with useable responses received from 566 employers, collectively employing some 2.2 million people, equivalent to 8.8% of all employees in the UK.<sup>15</sup> Participant organisations are drawn from all sectors of the economy – spanning the public and private sectors – and are of all sizes, from very small firms to the organisations with workforces of more than 5,000 people.

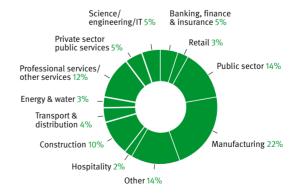
The survey was completed by senior executives. In small and medium-sized companies, this tended to be the managing director, chief executive or chairman. In larger firms, it was the human resources director or equivalent.

The results have been weighted using data from the Office for National Statistics to ensure they accurately reflect practices in all sectors of the economy.

#### Sectoral analysis

Responses were received from across all sectors of the economy (Exhibit 6). Public sector organisations make up about one in seven of respondents (14%). Among private sector participants, manufacturing firms account for just over a fifth (22%) while those in construction and professional services each make up about a tenth (10%) of the sample.

### Exhibit 6 Respondents by economic sector (%)

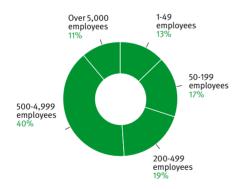


### Respondents by company size

Companies of all sizes participated in the survey – around one in eight (13%) employ under 50 staff while at the other end of the scale just over a tenth (11%) employ more than 5,000 people (Exhibit 7).

Official data suggests that, as with most business surveys, medium-sized and larger firms are over-represented, as the majority of UK businesses employ fewer than 50 people. But larger firms employ over half (53%) of the workforce<sup>16</sup>, so the survey broadly reflects overall employment patterns and practices.

### Exhibit 7 Respondents by company size (%)



# 4 Employers investing in skills

As the economy pulls out of recession, the spotlight is shifting to the private sector – and employers large and small – to provide the impetus for future growth and job creation. Business growth will depend on a number of factors, but employers know that investing in the skills of their workforce will give them a cutting edge.

### **Key findings**

- Over two fifths (41%) of firms plan to increase their investment in training
- Over half (55%) of employers are involved in apprenticeships, with almost a fifth (17%) planning to become involved in the next few years
- A third (33%) of employers believe cutting back on bureaucracy would encourage them to become more involved in apprenticeships.

#### **Business is increasing investment in skills**

This year's survey paints an encouraging picture, with firms becoming more upbeat on developing their training strategies. Two fifths (41%) of employers are planning to increase investment in the training and development of their staff over the next 12 months.

Last year, with the recovery in its earlier stages, only 14% of firms were planning to increase training investment **(Exhibit 8)**. Employers worked hard to maintain their investment in training during the downturn, but with budgets tight the focus was on targeting spend more effectively or providing more training on-the-job or internally.

With only 8% of organisations intending to reduce investment in this year's survey, on balance there is a net figure of +33% of organisations increasing training spend **(Exhibit 9)**. This positive trend is found across all sizes of organisation – with +43% of firms with over 5,000 staff increasing investment in skills and +30% of those with less than 50 staff.

Exhibit 8 Employers' intentions for training and development of staff (%)

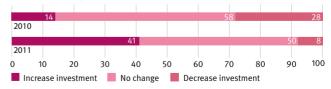
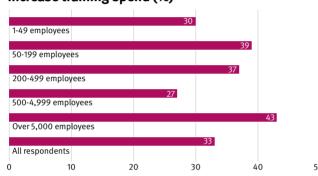


Exhibit 9 Net balance of firms planning to increase training spend (%) \*



\* Firms planning to increase training spend minus those planning to decrease spend

With the current onus on private sector firms to drive growth and job creation, the survey found a balance of +39% of private sector organisations looking to increase training spend. In the public sector where organisations are looking to manage the impact of the government's deficit reduction measures, intentions on training spend are neutral – with as many organisations increasing training spend as are cutting it.

## **Employers are committed to delivering apprenticeships**

Apprenticeships provide practical, business-focused training that delivers benefits to employers and apprentices — by improving business productivity and giving apprentices the skills they need to achieve well-paid and satisfying careers.

There are many examples of employers investing heavily in apprenticeship training and delivering excellent results through intensive mentoring and training. As Alison Wolf pointed out in her recent review of vocational education, "Apprenticeships at BT or Rolls Royce are more oversubscribed than the most desirable course at the best university. These types of courses offer a route to good salaries and quick promotion at world beating firms."

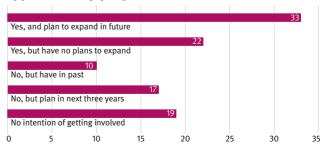
Employers in our survey show a strong commitment to apprenticeship programmes, with 55% currently providing apprenticeship training **(Exhibit 10)**. In addition, prospects for growth are positive, with half (50%) of employers either expanding their current apprenticeship programmes or planning to start providing apprenticeship places in future.

Business involvement in apprenticeships has grown steadily over the past four years of the CBI education and skills survey – from 48% (2008) to 55% (2011), demonstrating employers' continued commitment to high-quality apprenticeship training (Exhibit 11, page 16).

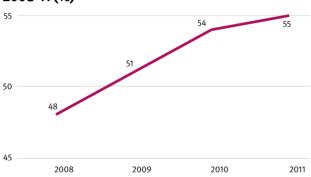
Successfully growing apprenticeship provision will need the involvement of firms of all sizes. Our survey shows that while many smaller firms are delivering apprenticeships, there is a continued correlation to company size, with a higher proportion of larger firms providing apprenticeship places. While over four fifths (83%) of organisations with over 5,000 staff are providing apprenticeships, this falls to 14% of firms with under 50 employees (Exhibit 12).

Small and medium-sized enterprises remain the largest untapped market in terms of providing additional apprenticeship opportunities – with many currently seeing apprenticeships as not relevant to them or apprehensive about the costs and bureaucracy of becoming involved. Small and medium-sized firms will work in

Exhibit 10 Employer involvement in apprenticeship programmes (%)

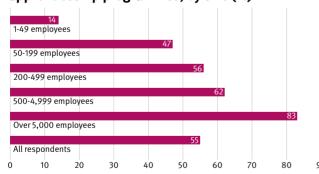


# Exhibit 11 Employers involved in apprenticeships 2008-11 (%)



partnership with a training provider, and good providers will shield them from some of the bureaucracy involved. But smaller firms lack dedicated HR resources and need clear, understandable information on a constantly changing apprenticeship process and support to find the right provider.

# Exhibit 12 Employer involvement in apprenticeship programmes, by size (%)



### Overcoming barriers to employer involvement

Business is a willing partner for government on apprenticeships and wants to work with ministers to successfully grow the quantity and quality of apprenticeship provision. Building on the current good practice of employers and encouraging even more employers to offer apprenticeships will be essential.

The survey asked employers what measures would encourage them to become more involved in apprenticeship programmes **(Exhibit 13).** Over half (56%) called for more financial incentives for recruiting and training apprentices. While apprenticeship programmes deliver clear benefits to an employer, they also involve an investment of time and resources to set up, administer and deliver the training.

Public funding will only cover part of the cost of delivering apprenticeship training – but can have a positive impact. In the early stages of the programme, the costs can outweigh the benefits,

### Exhibit 13 Action required to encourage more employers to get involved in apprenticeships (%)



with the apprentice not as productive as more experienced co-workers. In addition, government funding allows firms to take more of a risk in candidate selection, giving a chance to candidates with a wider range of abilities.

Employers must cope with high levels of complexity in the apprenticeship system. A third (33%) of employers want to see the government make further progress on stripping out unnecessary bureaucracy. The problem is not simply levels of paperwork, but the complexity of processes firms have to put in place to satisfy the requirements of the programme and of different organisations – including the Skills Funding Agency, Ofsted and awarding bodies.

Large firms (over 5,000 staff) with direct funding contracts take on all the costs and responsibilities of delivering accredited apprenticeship programmes. These firms are most concerned about bureaucracy, with over half (57%) of larger firms calling for progress in this area. But bureaucracy is also a concern for smaller firms who often work in partnership with providers – almost a third (30%) of firms with 200-499 employees experience difficulties.

With the need to support increased SME involvement, over two fifths (44%) of employers want to see measures to support larger firms who are willing to train more apprentices than they need to allow smaller firms in their sector/supply-chain to benefit from apprenticeship training. This includes over half (53%) of firms in construction – which is dominated by small firms, often working on short-term contracts and without the capacity to invest in the long-term training of an apprentice. Firms such as Carillion already operate 'over-training' models in the construction sector.

Over two fifths (43%) of employers also highlight the business relevance of qualifications frameworks, while over a third (35%) believe more suitably qualified young people should apply for apprenticeship places. Careers advice should make clear to young people that pursuing an apprenticeship is a route to a rewarding and successful career and should not be seen as second best to attending university.

# 5 **Skilling employees for sustainable growth**

The government faces the twin challenges of achieving a rapid reduction in the public finance deficit and setting the UK economy on a path of sustained economic growth.

That growth has to be underpinned by a reshaped economy, putting greater emphasis on high-value, export-oriented goods and services. The need to deepen and broaden skills across the economy to help achieve this has never been greater.

### **Key findings**

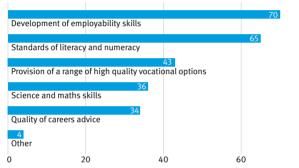
- Over two thirds of employers (70%) want to see the development
  of employability skills among young people at school and college
  made a top priority this does not require a new qualification
  but rather embedding the skills in the curriculum, as the best
  schools and colleges already do
- Two thirds of employers (65%) also see a pressing need to raise standards of literacy and numeracy among 14-19 year-olds
- A similar proportion (70%) want to see university students doing more to prepare themselves to be effective in the workplace
- Over half (56%) of employers want more action to reduce the red tape around publicly-funded training.

# Improving employability skills should be the top priority for schools

As the government rolls out its policies for schools and colleges, employers want to see the development of employability skills among young people made the top priority (the nature of these skills is outlined in chapter 6). Over two thirds (70%) of firms cite this as one of their top three issues for the government to address, with a similar proportion (65%) wanting to see a focus on improving the essential skills of literacy and numeracy (**Exhibit 14**).

Improving the core skills of literacy and numeracy – and enabling young people to make an effective transition into working life have long been concerns for employers. Only if these are properly addressed can young people begin to use their other skills and abilities to contribute in the workplace. The issue has gained added urgency against the background of rising unemployment among young people: in the three months to December 2010, nearly one in five (18%) of young people aged 18-24 were unemployed, up by more than 20% on the level of two years' earlier.<sup>17</sup>

### Exhibit 14 Business priorities for 14-19 education (%)



Note: Respondents were asked to identify their top three priorities

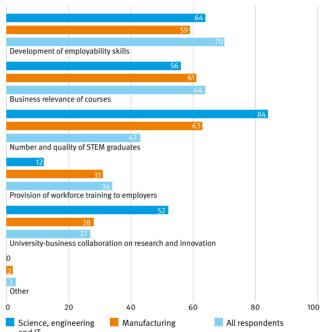
Employers are also keen to see the government encouraging schools and colleges to provide more in the way of high-quality vocational options (43%). As the recent review by Professor Alison Wolf showed, too many 14-16 year-olds are following vocational courses that in practice are of little or no value in terms of preparing them for higher education or employment. Employers strongly back the view that we need a combination of high-quality vocational options and high-calibre academic subjects, all underpinned by development of young people's employability skills.

# HE students too must shape up their employability...

Employability also emerges as the single most important concern in higher education (HE). In all, nearly three quarters of employers (70%) would like to see more effective development of graduates' employability skills **(Exhibit 15)**.

Ultimately, it is up to students themselves to seize the opportunities available to strengthen their employability – a theme emphasised in the CBI/NUS guide for students. <sup>19</sup>

# Exhibit 15 Business priorities for higher education (%)



Note: Respondents were asked to identify their top three priorities

80

Universities, students' unions, businesses and other agencies, however, have an essential role to play in getting the message across to students about the importance of shaping up their employability and giving them ways to develop and practice these essential skills. They can also play a part in helping students internalise the lessons of work experience placements and encourage them in articulating the skills acquired.

On a related theme, two thirds (64%) of employers rate improved business relevance of courses as among the most pressing priorities for HE. Many institutions are now taking steps in this direction, as research for the CBI/NUS guide showed, building more work-related elements into courses and encouraging greater student awareness of the skills they need and how to acquire them. But this has been a neglected area in the past and more must be done to improve performance.

#### ...and business is concerned about STEM skills

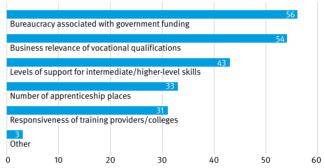
Close to half of all respondents (43%) also point to raising the numbers and quality of STEM graduates as a major area of concern. The issue is seen as particularly pressing among employers in sectors with relatively high proportions of the workforce needing to apply these skills directly on a day-to-day basis. Two thirds of employers in manufacturing (63%) see action on the number and quality of graduates in STEM subjects as a priority for action. Among science, engineering and IT firms, more than four out of five (84%) rate it as a priority, far ahead of other concerns.

The survey results point to a wish among many employers to see universities doing more to help them develop their workforces, strengthening the skills base among those already in employment. There is a body of positive experience<sup>20</sup> to draw on, but much more could be done, with a third (34%) of employers pointing to this as among their top priorities. At a time when universities are facing mounting financial pressure and intense competition in the market for undergraduate courses, institutions should be looking to grow their provision in the adult workforce field.

### Bureaucracy around publicly-funded training needs to be curbed

Help with developing the skills of those already at work is particularly urgent in reshaping the economy to one based on high-value, export-oriented goods and services.

### Exhibit 16 Business priorities for workforce skills (%)



Note: Respondents were asked to identify their top three priorities

Employers, however, remain concerned about the levels of bureaucracy associated with accessing government funding and support for training programmes. Over half (56%) of firms want government action as a priority to reduce the red tape involved (Exhibit 16).

The concern applies across firms of all sizes and all sectors.

Over half (54%) of employers also want to see rapid improvement in the relevance of vocational qualifications. As noted in relation to the 16-19 age group, the Wolf report has shown the poor quality of many of these, notably at lower skill/qualification levels, and their weak connection to the skills and knowledge needed for success in the workplace: "At least 350,000 young people in a given 16-19 cohort are poorly served by current arrangements. Their programmes and experiences fail to promote progression into either stable, paid employment or higher level education and training in a consistent or an effective way."

It should be no surprise that the third most commonly identified area for action by the government is the provision of support for intermediate and higher-level skill formation, such as advanced apprenticeships. In all, two out of five employers (43%) believe this to be a key area in need of improvement.

# 6 Getting the basics right for working life

Employers recognise it is their responsibility to train employees to do specific jobs. But young people must enter the labour market in possession of core skills – literacy, numeracy, and wider employability skills – which enable them to operate effectively from the outset of their working lives. There are too many young people leaving education with shortfalls in these essential skills, and this is reflected in business concern within the workforce over literacy and numeracy skills.

### Key findings:

- Many young people are still leaving school and college with serious shortfalls in their employability skills. Over half of employers (55%) experience weaknesses in school leavers' self-management skills, and two thirds (69%) believe they have inadequate business and customer awareness
- Levels of employer satisfaction with the employability skills of graduates are higher than for school and college leavers, but there are still alarming weaknesses in skills around teamworking (20%) and problem-solving (19%)
- Employers report widespread weaknesses in core skills among their existing employees – with almost half reporting problems with literacy and numeracy
- To tackle the basic skills shortfalls across the workforce, around two fifths of employers are providing remedial training to school and college leavers.

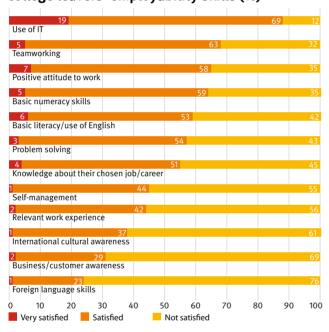
# Price of failure in school is high – for young people, businesses and society

It is no surprise that employers see improving the basic skills of school and college leavers as the number one educational priority. This year's survey shows that more than two in five firms (42%) are not satisfied with the basic literacy/use of English skills of school and college leavers, and over a third (35%) are unhappy with levels of numeracy (Exhibit 17, page 22).

There was never a golden age of universal high attainment in literacy and numeracy, and these problems have persisted over time. As far back as 2003, CBI data showed over a third (34%) of employers unhappy with the basic skills of school leavers.<sup>21</sup>

The UK can ill afford to have young people leaving compulsory education with inadequate literacy and numeracy – and for the young people concerned the weakness represents a major handicap at the start of their working lives.

# Exhibit 17 Employer satisfaction with school/college leavers' employability skills (%)



Teaching functional skills modules started in September 2010, but the CBI has been pressing for action for six years. Schools must be measured on their success in enabling young people to gain these crucial skills.

There is still much to be done to improve young people's employability skills more broadly, and the survey results show continuing widespread dissatisfaction among employers.

Employers do not expect young people to be job-ready, and recognise their responsibility to train them for specific jobs and roles. But firms do expect school leavers to be able to draw on a range of employability skills, enabling them to become rapidly effective in the workplace.

For example, over half (55%) of employers are not satisfied with young people's self management skills – expecting them to be better able to accept responsibility, manage their time effectively and be prepared to improve their performance. Two thirds of employers (69%) are also not satisfied with levels of business and customer awareness among school and college leavers, feeling that too many young people have weaknesses – for example, in understanding the need to provide customer satisfaction.

The combination of an increasingly global economy and heightened cultural sensitivities is making new demands on many people at work. Weaknesses in foreign language skills are nothing new, but are tending to be exacerbated since the requirement to take a language at GCSE level was ended (76% of employers are not satisfied with young people's language skills). In addition, well over half of employers (61%) perceive shortfalls in international cultural awareness among school and college leavers.

Perhaps predictably, use of IT emerges as the area receiving the highest employer satisfaction rating (88% satisfied or very satisfied). Even here, however, there is a lagging tail of weak skills among school leavers, with one in eight employers (12%) reporting gaps in the attainment they expect.

A positive attitude to work is the vital underpin that enables young people to approach the world of work with enthusiasm and a desire to learn and develop. It is therefore troubling that a third (35%) of employers are not satisfied with the extent to which young people display this critical attribute.

Recognising the importance of employability skills, in recent years schools and colleges have been endeavouring to embed them in the curriculum. At present 'personal learning and thinking skills' modules are used, but these do not generally place enough emphasis on ensuring students understand and articulate the skills they have learnt in ways that resonate with business and which reflect employers' views of employability.

# Exhibit 18 CBI definition of functional literacy and numeracy

The CBI's *Working on the three Rs* report (2006), produced with the then Department for Education and Skills, set out the functional literacy and numeracy skills employers need in the workplace.

To be functionally literate, an individual must be able to:

- Read and understand basic texts drawing out relevant information
- Construct properly spelt, grammatically correct writing that is suitable for the audience
- Write with legible handwriting
- Understand oral communications and react appropriately
- Be sufficiently articulate to communicate orally.

To be functionally numerate, an individual must have confidence with:

- Multiplication tables and mental arithmetic
- Percentages, ratios, fractions, decimals
- Different measures and conversion between them
- Spotting errors and rogue figures
- Odds and probabilities.

### Many graduates are weak in employability skills

On every measure of employability, employers are more satisfied with the skills of their graduate applicants and recruits than they are with school and college leavers (Exhibit 20, page 24). But too many employers are still reporting worrying shortfalls among graduates.

### **Exhibit 19 CBI definition of employability skills**

**Self-management** – readiness to accept responsibility, flexibility, time management, readiness to improve own performance

Teamworking – respecting others, co-operating, negotiating/ persuading, contributing to discussions

Business and customer awareness – basic understanding of the key drivers for business success and the need to provide customer satisfaction

Problem solving – analysing facts and circumstances and applying creative thinking to develop appropriate solutions

Communication and literacy – application of literacy, ability to produce clear, structured written work and oral literacy, including listening and questioning

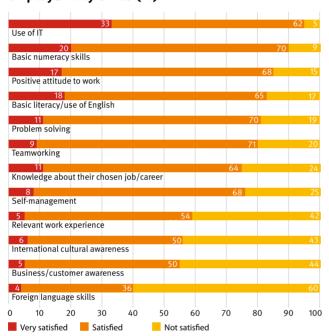
Application of numeracy – manipulation of numbers, general mathematical awareness and its application in practical contexts

Application of information technology – basic IT skills, including familiarity with word processing, spreadsheets, file management and use of internet search engines

One in ten employers (9%) reports shortcomings in the basic numeracy skills of graduates, while almost twice as many (17%) are not satisfied with standards of literacy/use of English among graduate candidates and recruits.

It is even more concerning to find a fifth (19%) of employers not satisfied with graduates' use of creative thinking to develop appropriate solutions to problems – which should be a prime outcome of higher education. A similar proportion (20%) do not find the teamworking skills of graduates meet their expectations.

# Exhibit 20 Employer satisfaction with graduates' employability skills (%)



Looking at sectors where problem-solving plays a particularly important part in graduate roles, the survey shows proportionately greater concerns among employers. A quarter of employers in construction (24%), manufacturing (26%) and science/engineering/IT (27%) are not satisfied with graduates' problem-solving skills.

A quarter of employers (24%) are also concerned about graduates' limited careers awareness, with nearly twice as many (42%) feeling graduates should have more relevant work experience. Business awareness is also seen as a prime area of weakness, with 44% of employers expressing dissatisfaction with graduates' business and customer awareness.

Remedying these shortfalls is best addressed through a partnership approach, involving students, HE institutions and employers. In the end, though, students and graduates themselves have to commit to making the difference, appreciating the importance of employability skills and deciding how best to develop and demonstrate their work-relevant skills through their courses and other opportunities.

#### Basic skills are a concern across the workforce

The results from our survey highlight the ongoing weaknesses in basic skills used at work across large parts of the UK workforce **(Exhibit 21).** Half of respondents express concern about the basic literacy (48%) and numeracy skills (48%) of some employees in their current workforce. Concerns about IT skills are higher still, with two thirds (66%) of firms expressing concern to some extent or a significant extent – a finding that reflects the shakier grasp of IT skills among some older employees.

Over the last four years of this survey, employers' concerns over a lack of core skills among their employees has deepened. Since 2008, employer dissatisfaction with numeracy within the workforce has increased by nine percentage points, and literacy by seven points.

### Exhibit 21 Employers reporting problems with core skills of current workforce over time (%)

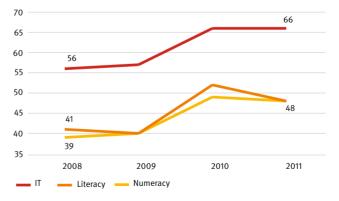
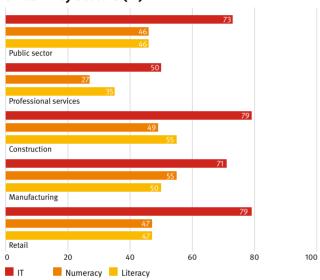


Exhibit 22 Employers reporting concern over basic skills – key sectors (%)



Note: Employers reporting concern to some extent and to significant extent

Looking at this year's data, the extent of concerns tends to rise with organisation size. Among employers with under 50 employees, only a third (32%) perceive literacy problems and 30% numeracy difficulties to at least some extent, while among those with over 5,000 employees, 66% have concerns about literacy and 65% about numeracy. Shortfalls in IT skills are seen as a more general problem, reported to at least some extent by 50% or more across firms of all sizes.

Employers' particular concerns over numeracy and literacy inevitably vary from business to business and sector to sector **(Exhibit 22)**, but there is broad agreement about how shortcomings in basic skills affect employees' ability to perform everyday tasks. They can hinder employees in being able to draw out information effectively from basic texts, compose coherent written communications, or work through basic arithmetic and percentages, such as calculating change, working out a discounted price or estimating materials needed.

# **Employers are diverting resources into remedial training**

To address the weaknesses in functional skills across the workforce, employers are diverting resources into remedial training **(Exhibit 23)**. This continues a pattern seen in previous surveys.

In the past year, more than two in five employers (44%) report having organised remedial training for at least some young people joining them from school or college. In all, a fifth of firms have provided training in literacy (22%) and similar proportions in numeracy (21%) and IT (20%) — some firms provided remedial training in two or all three areas. These figures show the continuing weakness in core skills, since the proportion of firms reporting remedial training for school leavers seems to be rising rather than falling: back in 2008, for example, 15% of employers reported providing remedial training for school leavers in literacy, 15% in numeracy and 22% in IT.<sup>22</sup>

Remedial training is even more widespread for adult employees, with more than half of employers (57%) saying they have organised training in at least one basic skill area in the past year. IT skills have been the top area for improvement, with 51% of businesses reporting having provided remedial training. There was less widespread activity on literacy (18%) and numeracy (13%). Once again, public sector organisations were particularly active, with three quarters (75%) reporting provision of remedial training to adults in at least one basic skill.

# Exhibit 23 Employers providing remedial training in past year (%)

	School/college leavers	Graduates	Adult employees
Literacy	22	12	18
Numeracy	21	7	13
IT skills	20	17	51

# 7 Skills for competitiveness

With UK businesses seeking to win a larger slice of the global market, it is essential they have the right mix of skills. The drive towards developing more high-value, export-oriented products and services will require more and higher levels of skills across the workforce.

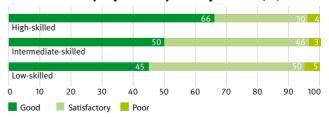
### Key findings:

- Most employers consider skill levels among their employees to be satisfactory for their current activities, with two thirds (66%) rating their high-skilled employees as good
- Far more businesses (71%) expect to increase the number of jobs requiring leadership and management skills than expect a reduction (6%)— a balance of +65%. Employers also expecting to increase their demand for higher-skilled employees (+58%)
- More employers (28%) expect to decrease the number of low-skilled employees in their workforces in the next few years than expected to increase it (23%)
- While most employers (75%) are confident there will be enough people available to fill their low-skilled vacancies in future, a majority (52%) are not confident of meeting their need for highskilled employees.

### Employers see the skill levels of their employees as adequate for now

Employers are broadly satisfied with current levels of skill among employees in their organisations (**Exhibit 24**), despite the weaknesses in functional skills noted in chapter 6. They rate two thirds (66%) of their employees in high-skilled jobs as having good levels of skills, with most of the remaining employees (30%) in jobs at this top level being viewed as having satisfactory abilities. Just one in 20 (4%) consider their employees in high-skilled roles as having poor levels of skills. But the bar is constantly being





raised by international competition, so no employer can be complacent about the skills of their employees at this level.

At lower levels, employer assessments are not quite so positive. At the level of intermediate skilled jobs, only half (50%) of employers rate general skill levels among their employees as good, and this drops below half (45%) when employers consider the skills levels of those in low-skilled roles. For both job groups, however, only one in twenty employers view the skills levels of their current employees as poor (3% for intermediate-skilled jobs and 5% for low-skilled jobs).

### There'll be a growing hunger for skills in future

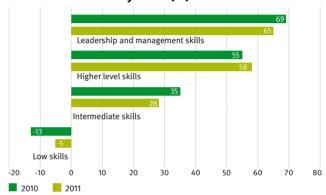
Employer demand for people to fill more highly-skilled occupations will grow in future. The major occupational groups expected to expand in the coming years are managers, professionals and associate professionals and technical occupations, all of which need high levels of education and skill development. In contrast, occupations such as administrative, clerical and secretarial work and machine and transport operatives are expected to see declining levels of employment.<sup>23</sup>

Results from our survey asking about the expected skill needs of organisations in the next few years show the strength of the drive towards a higher-skill economy **(Exhibit 25)**. Asked about their anticipated demand over the next three to five years, vastly more employers expected to need more people with leadership and management skills than expected to need fewer (71% expected to need more, 6% to need fewer and 23% no change, producing a positive balance of +65%). The balance of businesses expecting to require more people with higher skills was only a little lower (at +58%, slightly up on the response to the same question in 2010).

Survey respondents also expect to need more people with intermediate skills (+28%) in the next three to five years, as the economy recovers.

In the low skills category, employers expect a continued decline in employment numbers in the coming years. While half (50%) of employers expect no change in their number of low-skill jobs, more

Exhibit 25 Employer demand for different skills levels over next 3-5 years\* (%)



 ${\it *Firms reporting increased demand minus those reporting decreased demand}\\$ 

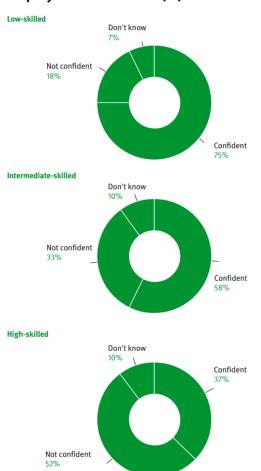
(28%) expect to reduce the number of low-skilled posts than expect to increase them (23%), producing a negative balance of -5%. This negative balance is more moderate than last year, as economic conditions have eased a little.

There will always be jobs at the bottom end of the skill spectrum, but the message from the survey results is that there will be ever more intense competition for a shrinking number of entry roles. For the long-term unemployed or others seeking to re-enter employment after a prolonged break, the importance of gaining skills is clear.

# Can businesses meet their need for more skilled employees?

Perhaps unsurprisingly in view of these results, most employers (75%) are confident there will be enough people available to them to fill their low-skilled jobs in future **(Exhibit 26)**. But even for these roles, a fifth (18%) of businesses are not confident there will be sufficient recruits available to meet their requirements, with the remainder uncertain. Overall, the results show a positive confidence balance of +57%.

# Exhibit 26 Employer confidence in accessing employees in the future (%)



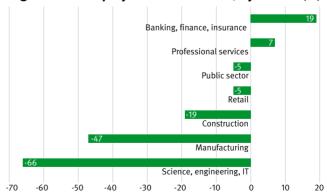
Businesses' confidence about being able to fill all their jobs requiring intermediate-level skills is much lower. While half (58%) of employers are confident there will be enough people available with the right skills, a third (33%) are not confident, with one in ten (10%) uncertain, giving a positive balance of +25%.

When it comes to filling high-skilled jobs in the future, though, the proportion of businesses (52%) not confident they will be able to find sufficient recruits outweighs those (37%) who believe there will be enough people available to them (producing a negative confidence balance of -15%). This lack of confidence may in part reflect the scale and pace of expansion expected in demand for higher-skilled employees and signals that the 'war for talent' will continue to be waged.

### Worries over filling high-skilled posts are unevenly spread

There are big differences between sectors **(Exhibit 27)**. In banking, finance and insurance, for example, a positive balance of +19% of employers are confident they will be able to fill all their high-skilled jobs in the next few years, and among professional services firms too there is a positive confidence balance (+7%). Businesses in other sectors see much tougher times ahead. Among science, engineering and IT firms, a huge negative balance of -66% are not confident there will be enough skilled people available to fill their high-skilled jobs, and the results for manufacturing too show most employers are not confident of being able to recruit sufficient highly skilled staff in future (a -47% balance).

### Exhibit 27 Employer confidence in accessing high-skilled employees in the future\*, by sector (%)



<sup>\*</sup> Firms reporting 'confident' minus those reporting 'not confident'

# **8 Employers supporting education**

Business recognises it has a key role to play in supporting schools to raise achievement and improve performance. Employers can spell out the relevance of the skills and knowledge developed at school to the workplace and ensure more young people leave the education system with the skills needed for success in their working lives. Business links with schools are widespread and there is an appetite for greater engagement.

### **Key findings**

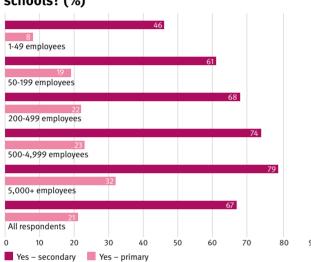
- Engagement with secondary schools is a clear priority for employers, with two thirds having built links (67%)
- Employers are stepping up their commitments, with over a third (36%) having increased their school engagement activity over the last year
- Business involvement goes beyond simply providing work experience for pupils – nearly half of employers (48%) support careers advice and more than one in four (28%) provide school governors
- There is an appetite from employers to play a greater role in delivering careers advice more than half (54%) would be willing to do more, rising to two thirds (66%) of large firms.

#### **Employers are committed to supporting schools**

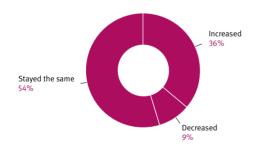
The majority of employers in our survey have developed links with schools, seeing the benefits to all parties that engagement can bring. Connections are particularly strong between businesses and secondary schools (67%) while a fifth (21%) of employers have engaged with primary schools this year **(Exhibit 28)**. Strong levels of engagement among large businesses are trickling down to smaller firms – around half of companies with 1-49 employees (46%) now work with secondary schools. Encouragingly, the number of employers with no school links fell this year to 29% (from 31%) last year.

The business commitment to working with schools is gaining momentum as more employers and schools experience the benefits of working in partnership. Over a third of employers increased their engagement with schools in the past year (36%), rising to more than half of businesses with 5,000+ staff (51%) (Exhibit 29).

# Exhibit 28 Have you developed links with schools? (%)



# Exhibit 29 Have your activities with schools increased or decreased over the last year? (%)

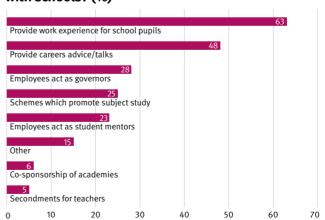


### Businesses support schools in a range of ways

Many businesses provide work experience for school students – 63% of employers are currently engaged in this activity, which is an important way for young people to develop employability skills (chapter 6). But business links with schools include a range of other activities, all of which are vital in supporting teaching, school management and successful progression into the world of work (Exhibit 30).

Schemes in which employers engage with schools to promote subject study are widespread, with one in four businesses (25%) having supported young people in this way. This kind of engagement is particularly common among science, engineering and IT firms (38%), indicating that businesses are responding to the need to enthuse and inspire young people about studying science, technology, engineering and maths. The STEM ambassadors scheme run by STEMNET is a good example of this kind of activity – there are now 27,000 STEM employees going into schools to excite students about STEM study.<sup>24</sup>

Exhibit 30 What is the nature of your work with schools? (%)

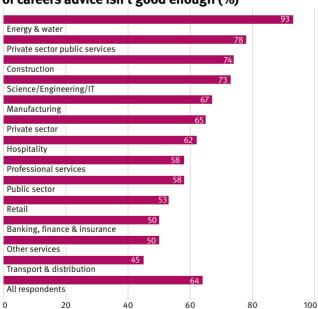


School governance is another area where business involvement can make a real impact. Many employers (28%) now send staff into schools as governors, letting them draw on their business expertise to help schools run efficiently and effectively. Businesses interested in finding out more about school governance can visit the school governors' one-stop shop.<sup>25</sup>

## Careers advice must improve – and business is ready to help

Young people are not in a position to make informed choices about their future career because of inadequate careers advice in schools and colleges. Only 6% of businesses are confident that careers advice is good enough, while nearly two thirds (64%) think advice must improve (Exhibit 31).

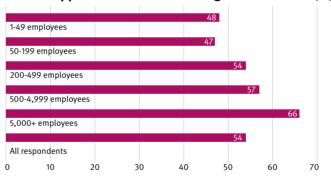
## Exhibit 31 Employers believing the quality of careers advice isn't good enough (%)



All young people need access to high quality, impartial careers advice which is grounded in information about the jobs market and allows them to make informed choices about their future. This must include advice about the vocational routes open to them — such as apprenticeships — as well as more traditional academic options.

The good news is that business is prepared to help make this improvement: half of employers (48%) currently support delivery of careers advice and more than half (54%) would be willing to play a greater role **(Exhibit 32)**. The appetite to support schools on careers advice is particularly strong among employers who say they are currently dissatisfied with careers advice – 62% of this group are willing to do more. It is particularly encouraging that many smaller firms – which are less likely to have links with schools – are keen to do more to make young people aware of the opportunities available to them (48% of companies with 1-49 employees).

Exhibit 32 Organisations willing to play a greater role to support schools in delivering careers advice (%)



# 9 Meeting the need for STEM skills

Science, technology, engineering and maths (STEM) skills underpin the UK's ability to compete and grow in a range of industries. Demand for these skills is strong across the economy and is set to grow in the next three years – meaning STEM study will continue to unlock an array of opportunities for young people at every skills level. Action must be taken by government and businesses to ensure schools, colleges and universities can provide high quality, business-relevant STEM education and training which is appealing to students from every background.

### **Key findings**

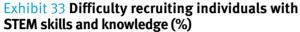
- STEM skills shortages are widespread 43% of employers currently have difficulty recruiting staff, rising to more than half of employers (52%) expecting difficulty in the next three years
- The government must tackle shortages by promoting science and maths in schools (62%) and supporting STEM-related apprenticeship programmes (54%) – the CBI is ready to help on both fronts.
- STEM qualifications alone aren't enough many employers find that applicants lack employability skills (36%) and workplace experience (37%)
- Business understands it has a key role to play many employers offer STEM-related work experience (31%) and engage with schools to promote STEM subjects (28%).

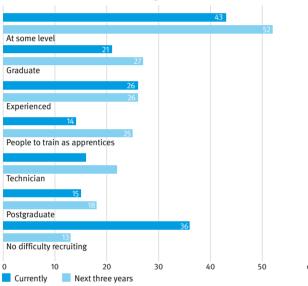
### STEM skills are in demand at every level – but employers face difficulty finding staff

Employers of every size are struggling to find the STEM talent they need, from companies with a handful of staff to some of the UK's largest employers: 43% of all firms have difficulty recruiting STEM skilled staff at some level. While shortages exist for young people completing their education and training, one in four employers (26%) struggle to find experienced staff with workplace expertise in science, technology, engineering and maths **(Exhibit 33)**.

This concerning picture is set to get worse, as employers expect growing difficulty in finding STEM-skilled staff over the next three years. Overall, over half (52%) of businesses will struggle to recruit staff with STEM skills. The number of employers without existing difficulty (36%) is expected to drop sharply to just 13%.

Demand for STEM skills over the next three years will grow quickly for new recruits at all skill levels. In particular, demand for people to train as apprentices will rise from 14% to 25% (see chapter 4 for more on apprenticeships) and among manufacturers, 43% predict difficulty recruiting apprentices in the next three years.





The need for graduates in construction is also set to jump: 12% currently have difficulty finding graduate talent, but 26% expect problems looking ahead **(Exhibit 34)**. Positively, these findings indicate that employers are forecasting strong job creation for new staff – but they also suggest that business growth may be constrained by a lack of skilled school, college and university leavers to fill these roles.

# Exhibit 34 Current and future STEM recruitment difficulties in key sectors (%)

	Manufacturing Currently	Next 3 years	Construction Currently	Next 3 years
People to train as apprentices	30	43	12	35
Technician	27	30	6	38
Graduate	27	34	12	26

Recognising the difficulties they face in finding STEM talent, employers are willing to pay a premium for the skills they value and need. More than a third of companies in science and IT (40%), energy and water (33%) and construction (33%) report that STEM graduates earn more than other graduates over the course of their careers.

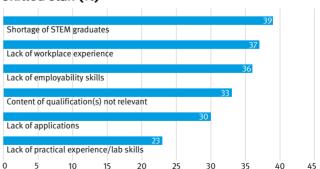
### STEM applicants are not meeting business needs

A lack of applications is the biggest barrier to recruitment for STEM roles, particularly among graduate entrants. Around a third of employers (30%) report a lack of applications and 39% are short of STEM graduates – this demonstrates a clear business need for an increase in the number of graduates studying STEM subjects (Exhibit 35).

Even when employers find STEM applicants with the right qualifications, many lack the workplace experience (37%) and employability skills (36%) necessary to succeed in a role. These skills – which include teamworking, customer awareness and communication – are rarely included in formal qualifications yet are critical to an employee's ability to adapt to the changing demands of the workplace (see chapter 6).

In addition, many STEM applicants hold qualifications not relevant enough to the needs of business – one third of all employers (33%) find this to be a barrier to recruitment. To overcome this problem,

### Exhibit 35 Barriers to recruitment of STEM skilled staff (%)



employers must be prepared to work with education and training providers to revise programmes of study in light of workplace developments – such as technological advances in manufacturing and science-based industries.

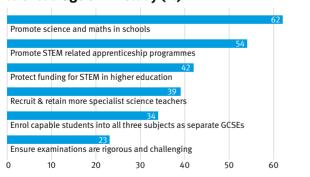
## Science and maths hold the key to STEM progression

Studying science and maths unlocks a range of employment opportunities for young people across the breadth of the economy. Businesses are clear that government must take action to promote these subjects. Almost two thirds of businesses (62%) see this as the most important way of tackling STEM shortages (Exhibit 36).

Success in promoting science and maths to young people depends on high-quality teaching delivered by subject specialists. Yet there are not currently enough specialist teachers in schools to meet the need for more science and maths – almost one in four secondary schools in England does not have a specialist physics teacher. More than one in three employers (39%) see the need for recruitment and retention of specialist science teachers to better address existing shortfalls.

This is particularly important if uptake of triple science GCSE - the

### Exhibit 36 Steps government should take to encourage STEM study (%)



best preparation for A-level and beyond – is to improve. Currently less than 20% of students take the three separate sciences, falling to just 3.9% of those who qualify for free school meals. A third of employers (34%) recommend enrolling all capable students into triple science GCSE – those achieving level 6 at age 14 (key stage 3).

Beyond school, apprenticeships in STEM sectors are an increasingly popular route among young people and employers. Business is clear that the government should focus on supporting the development of these programmes and promoting them to young people. This is the second most important way of increasing the number in STEM education and training according to employers (54%).

If the education system is to meet business demand for more STEM graduates, funding for STEM in higher education must be protected. With government support for higher education teaching falling sharply from 2012, remaining resources must be focused on these subjects of immediate economic importance, which are often costly for universities to provide.

#### **Business can do more to support STEM in schools**

Employers are aware that they have a key role to play in promoting the study of STEM subjects by young people. Understanding the relevance of science and maths to a diverse range of careers, and hearing employees talk about how they use the subjects on a daily basis can remove negative perceptions and inspire students (Exhibit 37).

Many employers offer high-quality work experience placements relevant to STEM subjects (31%), which can help students understand their practical application. STEM work placements are particularly common in the energy and water (60%) and construction sectors (56%). Work experience also plays an important role in supporting careers information, advice and guidance, by giving students first-hand experience of STEM in the workplace.

### Exhibit 37 Steps business can take to promote study of STEM subjects

	Energy & water	Construction	Science/ engineering/IT	All respondents
Encourage employees to become STEM ambassadors	67	17	27	11
Provide financial incentives	27	43	27	12
Promote STEM careers resources	40	4	23	13
Engage with universities to develop business-relevant STEM courses	53	30	38	17
Engage with schools to enthuse pupils about STEM study	80	28	46	28
Provide high-quality work placements	60	56	46	31

A key barrier to recruitment of STEM staff is the low business-relevance of STEM qualifications. Recognising that they are well placed to help tackle this problem, employers are engaging with universities to develop STEM courses with built-in business relevance, by participating in degree programme advisory boards or through the creation of entirely new degrees. Nearly a fifth (17%) of all employers are involved in this way, including more than half (53%) of energy & water companies.

A good example of this kind of engagement is HP's collaboration with the University of the West of England to launch the UWE HP enterprise computing degree – a course combining academic study with work placements and which equips graduates with a degree and an industry-recognised professional qualification.

Businesses also encourage employees to become STEM ambassadors, going into schools to talk about their work and promote STEM subjects to students. Uptake varies by sector: two thirds of employers in energy and water (67%) recommend the scheme to their employees, while 17% in construction and 11% of all respondents encourage employees to participate.

Financial support is another way for employers to promote STEM study and careers to potential new recruits. Incentives can include payment for internships, sponsorship through further or higher study and sign-on bonuses for new staff – 12% of all employers currently take this step, rising to 27% in science and IT and 43% among construction companies.

# 10 **Businesses and universities in the new era**

Businesses draw heavily on the graduate talent, high quality research and skills provision of the UK's universities. In a changing landscape of higher education, strong partnerships between business and universities are more important than ever – for sustaining the world-class reputation of UK higher education and to drive business productivity, performance and growth.

### **Key findings**

- One in five jobs (20%) now requires a degree rising to 70% in professional services
- Business has a strong preference for STEM degrees they are favoured by 41% of all employers
- Employability skills are the most important factor taken into account when businesses recruit graduates – four in five employers (82%) value these skills
- 80% of all employers now have links with universities or plan to build them in the future.

#### Higher-level skills are in demand

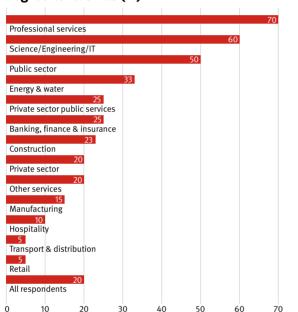
Graduates bring the knowledge, skills and subject-specific expertise businesses need to drive productivity and growth. Employers will look to the 2.4 million students currently at university to meet their demand for higher level skills in the next five years. This is particularly true of the professional services sector, where 70% of jobs now require a degree (Exhibit 38).

Other sectors which draw heavily on graduates include science, engineering and IT (60%) and the public sector (50%). As we saw in chapter 9, 39% of employers finding difficulty in recruiting STEM staff cite a lack of graduate applicants as the major problem. While some industries have a lower proportion of jobs requiring degree-level skills – such as manufacturing (15%) and hospitality (10%) – graduates are needed across every sector and are set to fill one in five of all jobs (20%).

#### Picking the right degree is important...

In an increasingly competitive labour market, being a graduate is a significant advantage. In many cases, having completed a degree-level course can satisfy an employer's requirements – they are looking for the ability to understand complex information and apply it in an informed way. But one in five employers (20%) need graduates with degrees in specific subject disciplines, utilising the technical skills associated with certain programmes of study (Exhibit 39).

Exhibit 38 Proportion of jobs requiring degree-level skills (%)



It is important that businesses are clear about which degree subjects they require, so prospective students know what they need to study to access certain careers. This is especially important in the

80

Exhibit 39 Proportion of jobs requiring a specific degree discipline (median %)

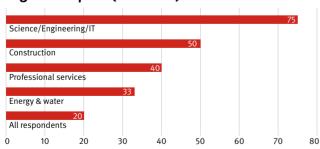
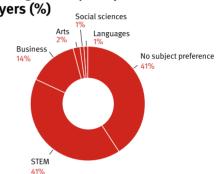


Exhibit 40 Degree subjects preferred by employers (%)

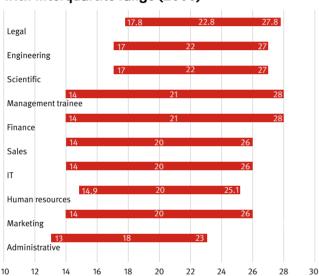


science/engineering/IT sectors, where 75% of jobs require a specific degree, and in construction, where half (50%) of jobs need graduates in a certain discipline.

Degrees in STEM subjects are particularly sought-after by employers -41% prefer these degrees. The mathematical abilities and analytical skills associated with STEM study are in high demand across the economy. Degrees related to business (14%) are also wanted (**Exhibit 40**).

It is clear that employers are willing to pay a premium for the STEM qualifications they value. Engineers and science graduates can expect a median starting salary of £22,000, the second highest wage attracted by graduates of any discipline. Law graduates command the highest starting salary (£22,800) and those going into management trainee and finance roles can also expect a strong return to their studies (£21,000) – **Exhibit 41, page 38.** 

## Exhibit 41 Median starting salaries by job type, with interquartile range (£000)



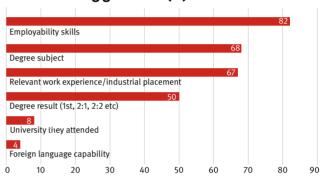
#### ...but developing employability skills is crucial

When recruiting graduates, businesses are looking out for employability skills first and foremost. For the third year running, this factor was rated number one by graduate recruiters. More than four in five employers (82%) are seeking these skills which include the ability to problem solve, work as part of a team and manage time effectively **(Exhibit 42)**.

Competition for graduate jobs is intense and those aiming to move smoothly into the world of work must take the development of employability skills seriously, as outlined in the CBI/NUS guide.  $^{26}$ 

As we have seen, employers are often also on the lookout for graduates in certain subject disciplines (68%) and half (50%) take into account the degree result achieved by students. This has doubled since last year's survey (25%), suggesting that employers have tightened their selection criteria as they again begin to expand recruitment.

# Exhibit 42 Most important factors considered when recruiting graduates (%)



Having relevant work experience – such as an industrial placement or internship – ranks almost as highly as having the right degree and is a key factor for two thirds of graduate recruiters (67%). The good news is that many firms are offering these opportunities to students.

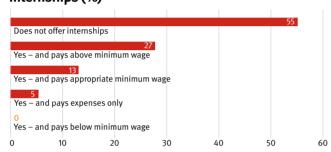
#### Internships boost employability skills

With the graduate labour market remaining challenging, internships are a valuable route for young people to boost their employment prospects by developing their employability skills and gaining a foothold within an industry.

Almost half (45%) of employers in our survey offer internship opportunities, including two-thirds (67%) of firms with over 5,000 staff **(Exhibit 43)**. Encouragingly, almost a third (29%) of firms with under 50 staff are also providing internship placements.

Importantly, our survey shows that those employers offering internship opportunities are willing to pay their interns. The vast majority (89%) of those offering internships pay their interns at or above the appropriate minimum wage. But as internships will often be work experience opportunities, employers must retain the right to pay on an expenses-only basis – an option taken by 11% of firms offering internships.

Exhibit 43 Employers offering graduate internships (%)



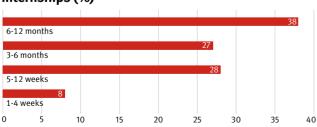
There has been a lot of recent debate over access to the professions and whether a proliferation of unpaid internships affects social mobility. Our survey found 48% of employers in professional services offering internships, and among these firms just 13% paid only expenses.

Overall, internship opportunities tend to be of significant duration, with most (38%) lasting six to 12 months. Only a small minority (8%) are for less than four weeks **(Exhibit 44)**.

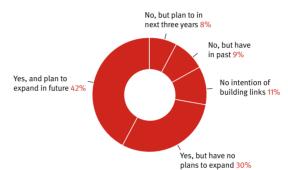
### **Business-HE partnerships are set to grow**

Engagement between businesses and universities can be a powerful source of benefits for both parties, and for students. Encouragingly, 72% of employers have developed links with universities – an increase of six percentage points on last year's

Exhibit 44 Typical duration of graduate internships (%)



### **Exhibit 45 Business links with universities (%)**



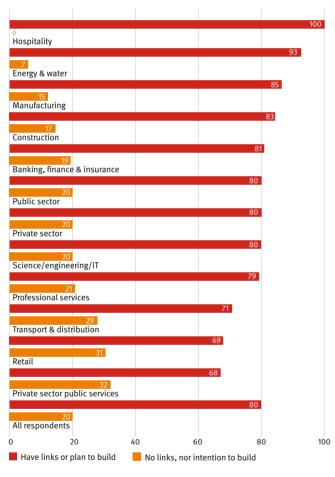
survey. But this growth is set to gain pace: 42% of businesses plan to expand their engagement with universities in the future and a further 8% expect to forge connections for the first time **(Exhibit 45)**.

Only one in nine of all employers (11%) has no intention of building links with universities. Perhaps unsurprisingly, this is higher among small firms which have less resources available to dedicate to engagement (20%), but very few large firms (5,000+ staff) have no intention to build links (5%).

Four fifths (80%) of employers in every sector of the economy have links with universities or plan to build them **(Exhibit 46, page 40)**. In the majority of industries, including science/engineering/IT (80%), banking, finance and insurance (81%) and energy & water (93%), more than four in five businesses have or plan to develop partnerships.

As more and more universities and businesses see the benefits of collaboration, the competitive pressure on those without links will grow, and as engagement becomes the norm, unengaged businesses will have to follow suit in order to remain as competitive graduate recruiters.

# Exhibit 46 Employer links with universities by sector (%)



### **Engagement takes several forms**

Businesses and universities seeking to build new or deeper links have a considerable range of options to choose from, ranging from supporting students through to designing business-relevant courses and commercialising cutting-edge research. As we have seen, many employers offer sandwich years or internship opportunities (46%), but this is only one form of engagement **(Exhibit 47)**.

Partnering with universities for research and innovation is something which 40% of businesses are currently engaged in. Initiatives such as knowledge transfer partnerships (KTPs), which place a recent graduate or post-graduate in a business to work on a specific research-based project, are effective ways of tackling complex business problems and building relationships with partner universities.

Exhibit 47 Nature of employer links with universities (%)	
Provide sandwich years or work placements	46
Partner with universities for research and innovation	40
Offer internships to graduates	38
Provide 'real-life' projects and resources	36
Sponsor students	28
University provides workforce training for our organisation	22
Offer students jobs at the end of their penultimate year of study	22
Participate in degree advisory boards	18
Other	17
Develop research projects with public research funders	13
Provide financial support to new graduate recruits	8

Businesses also see the value of supporting teaching and learning, by providing students with access to real-life projects and resources to demonstrate the practical application of knowledge and skills – a third (36%) of employers are engaged in this way. Alongside this, some employers take a more direct role in shaping the content of degree courses by participating in degree programme advisory boards (18%).

As tuition fees rise and the HE system becomes increasingly driven by student demand, employers are looking to support students financially. Over a quarter of businesses currently sponsor students through degrees (28%) and 8% provide financial support to new graduate recruits. This kind of support not only relieves some of the financial pressure of HE from graduates, but allows employers to identify and attract top talent at an earlier stage, reducing risk and guaranteeing a high-quality workforce.

# 11 Building a responsive skills system

Employers will deliver training through several different routes – internally or externally, accredited or unaccredited – and will choose the method that best suits them. When employers do engage with the external skills system they look for provision that is responsive to their needs, and for government support to help them develop the skills that will let their businesses grow.

### **Key findings**

- Two thirds (64%) of employers believed apprenticeships should be the priority for government funding
- Only a third (33%) of the training employers provide to staff leads to government-recognised qualifications
- Almost nine in ten (89%) of organisations use external providers, but providers must become more responsive to business needs.

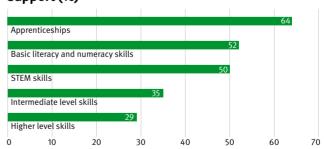
## Supporting the development of business-relevant skills

As part of the government's deficit reduction measures, the further education resource budget is being cut by 25% over the spending review period. While business investment in training has always outweighed the contribution of the public purse, government support can have a targeted impact. It is therefore even more important that available public funding helps the development of business relevant skills.

Almost two thirds (64%) of employers want to see funding prioritised towards apprenticeships – and this is an area where government is already increasing spending **(Exhibit 48)**.

Over half of employers (52%) believe support should be targeted at literacy and numeracy skills. As this survey illustrates (chapter 6) employers continue to experience difficulties with literacy and numeracy in the workforce, despite these skills being essential for

# Exhibit 48 Business priorities for public training support (%)



all spheres of employment. It's the government's responsibility to ensure people gain these competencies if they have not done so through the school system, and it's right that ministers are committed to continuing to fund this training.

Half (50%) of employers want to see support for developing STEM skills – reflecting both their importance for future economic growth and also the shortages businesses currently face.

## Qualifications do not always deliver business requirements

Employers will choose accredited qualifications only if the programmes deliver the skills they need. While many employers recognise the benefits for staff of having transferable qualifications, the priority will be whichever training develops key competencies.

The survey found that only a third (33%) of the training employers provide leads to government-recognised qualifications – a finding which has remained relatively consistent over the last few years. Employers will often find that the content of a qualification is not relevant, or they might be deterred by additional verification and assessment procedures that are associated with accredited programmes.

The smallest firms in the survey – those with under 50 staff – were the least likely to offer accredited training. Under a third (28%) of the training these firms provide leads to recognised qualifications, partly due to the difficulties smaller firms have in coping with staff being absent on training.

#### **Providers must be responsive to business needs**

Almost nine in ten organisations (89%) in our survey have used external providers to deliver part of their training to staff. Providers can be valuable partners for employers – providing access to valuable teaching resources and expertise. Among firms using providers – just under half (45%) of training is delivered externally.

The survey found clear differences between sectors. Retail firms – where a lot of training is likely to be practical and on-the-job – deliver only 28% of their training through providers. This contrasts

with science, engineering and IT, where 57% of training is delivered externally, reflecting the need for a greater degree of theoretical learning.

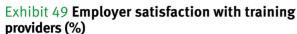
When choosing the best provider, an employer will base their decision on whether the provider can deliver high quality and relevant training in a way that fits with the day-to-day running of the business. The need to be responsive to employer needs is increasingly important. With the government moving towards creating a more competitive market for workforce training, employers will have a greater ability to choose and influence provision. And a business will only choose – and be willing to pay for – quality.

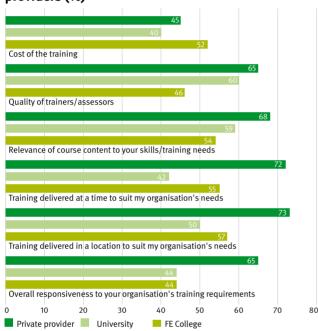
Private providers are the most common choice for employers using external provision – four in five (80%) of firms in our survey used private provision, often for short, unaccredited courses. Over a third (36%) of employers worked with further education colleges and a quarter (26%) with universities.

Two thirds (65%) of employers were satisfied with the overall responsiveness of private training providers **(Exhibit 49)**. Further education colleges and universities scored lower – with 44% of employers satisfied with them.

The survey found:

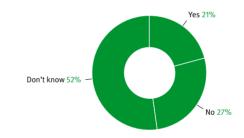
- Private training providers performed more strongly on the method
  of delivery and the need to fit in with the day-to-day running of
  the business. Almost three quarters (73%) of employers said
  training was delivered at a convenient location and 72% at a
  convenient time
- Further education colleges performed best among providers on the cost of training – with 52% of employers satisfied. Colleges also performed comparatively well on the method of delivery, with employers feeling they showed greater flexibility than universities
- Universities relied on their teaching expertise with three fifths (60%) of employers satisfied with the quality of training and 59% with the relevance of course content.





Bigger employers with more time and resource had the most favourable view of SSCs. On balance +13% of firms with over 5,000 staff felt their SSC added value, with only 37% answering 'don't know'. Smaller organisations (under 50 staff) who may find it harder to connect with the SSC network were more sceptical with a negative balance of -18% saying their SSC added value, but a much higher proportion (58%) saying 'don't know'.

# Exhibit 50 Proportion of employers believing their Sector Skills Council 'adds value' (%)



### **Getting value from Sector Skills Councils**

Sector Skills Councils (SSCs) have an important role in the organisational landscape of the skills system. As the representative employer body for their sector they perform a variety of tasks, including tackling sector-wide skills issues and supporting the development of relevant qualifications.

Our survey asked employers whether they believed their SSC added value to their organisation. Twenty-seven percent said their SSC did not add value compared to 21% who believed they did, representing a net balance of minus 6% **(Exhibit 50)**. The majority of employers (52%) answered 'don't know' reflecting the difficulty SSCs – as relatively small organisations – can sometimes face in building awareness across large numbers of employers.

# 12 Talking business

Operating effectively in a global economy relies on the right language skills. Staff who can communicate at least conversationally – combined with an understanding of the local culture – can make all the difference in the conduct of business, consolidating relationships with existing suppliers and customers and opening the way to new contacts.

### Key findings

- Only a quarter (27%) of businesses say they have no need for foreign language skills among their employees
- Language skills are particularly important in sectors such as manufacturing and banking, finance and insurance, reflecting the globalisation of organisations
- The greatest demand is for a level of language skills that can help in building relations with overseas contacts
- The major European languages are still those in greatest demand, but there are also widespread requirements for languages to help business in the major emerging economies.

#### A global market demands language skills

The UK relies on its ability to compete in international markets. Within the first year of taking office, the prime minister has led high-profile trade teams to India, China and the Middle East.

To make the most of opportunities of this kind, firms need staff who can communicate in foreign languages. English has become the international language of business – in itself a real benefit for the UK – but there are enormous advantages for British businesses if they have employees in key roles with the language skills to communicate with suppliers, customers and officials in their own tongue.

### Language skills serve varied purposes

For around one in twelve organisations (8%), the ability of at least some members of staff to speak one or more foreign languages is an essential core competence for the business (Exhibit 51). Much more commonly, fluency in another language helps more generally in the conduct of business and can assist staff in their careers. Around one in five employers (21%) see foreign language ability as helpful in building relations with overseas suppliers, customers and other contacts, while one in ten (11%) believe it assists staff mobility within the organisation, facilitating international working.

Exhibit 51 Need for employees who can speak foreign languages (%)

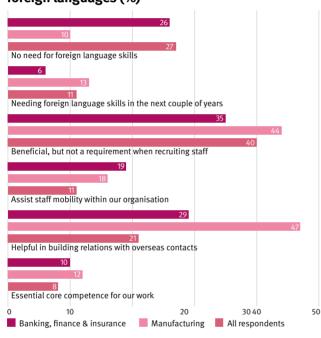
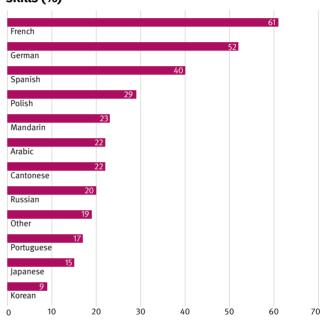


Exhibit 52 Employer demand for foreign skills (%)



Language skills are seen as much more important in some sectors than across the economy as a whole, reflecting the significance of international links for industries such as manufacturing and banking, finance and insurance. In manufacturing, for example, nearly half (47%) of firms see foreign language skills as helpful in building relations with overseas contacts, while one in eight (12%) view foreign languages as an essential core component for their operations. In the finance sector, nearly a third (29%) say that language skills are helpful in building relationships with overseas contacts and a tenth (10%) describe foreign language skills as essential to their business. Around one in five organisations (19%) in the finance sector also see foreign language skills as assisting staff mobility within their organisation, reflecting the sector's increasing globalisation.

#### **European languages still top the list**

The major European languages are those most commonly mentioned as being in demand **(Exhibit 52)**, led by French (61%) and German (52%). France and Germany still represent – along with the US – the largest export markets for British goods. Spanish too is in demand, sought by two in five (40%) of those employers wanting employees with language skills. Spanish is valued not just in Europe but also as the lead language of fast-growing economies across Latin America (and increasingly parts of the US).

After Spanish, the top demand – by almost a third of employers (29%) seeking language skills – is for Polish. The scale and importance in the UK of the migrant workforce from Poland and other parts of central and eastern Europe is well known, so it is no surprise that many British employers need employees who understand the language and culture to achieve smooth and effective working relationships.

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## Printer FSC acccreditation

Printed by DuncanPrint on Revive 75 White Silk, containing 75% recovered fibre and 25% virgin fibre certified by the FSC. DuncanPrint is certified to ISO 14001 and registered to EMAS environmental management systems NEZ052.

Laminated with purelam, derived from wood pulp from sustainable managed forests accredited with DIN EN 13432 the standard for compostibility and biodegridation. **CBI** 

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