GRADUATES, SKILLS AND JOBS

SUMMARY

The current indicators of demand for graduates are positive and point towards employers facing shortages of graduate talent.

There are indications of continuing robust demand for graduates over the next few years, and continuing challenges for recruiters of graduate talent.

Many graduate skills are rated highly by employers, but graduates are only part of the answer to meeting employers’ skills needs.

There is a need to consider:

• how effective universities are at describing the skills of their graduates, how effective employers are at identifying their skills needs, and the role of improved university-business dialogue to continually improve this skills matching

• challenges for key sectors such as STEM; policy makers and stakeholders should seriously consider and implement the recommendations of both the Wakeham review and the Shadbolt review of computer science, and seek to learn wider lessons from these

However, even the lower estimates of the number of graduates in non-graduate jobs still represent a challenge that should be addressed as a priority.

The reasons for graduates working in non-graduate jobs and the impact of skills mismatches need to be understood and effective policy interventions identified and adopted. Stronger links between business and universities are a key foundation for addressing skills mismatches.

Graduates and graduate skills are part of the answer to meeting employers’ skills needs but so too are pre-degree qualifications at level 4 and 5 – both professional and technical education have important roles to play.

There is a broad area of crossover and collaboration between academic and vocational education, with universities delivering vocational qualifications and education and further education colleges delivering degrees, and often working in partnership.

There needs to be a better understanding of this broad area of crossover so that both higher and further education can help address employers’ skills needs, especially in relation to apprenticeships. Different and flexible models of partnership between higher education, further education and business need to be explored, developed and promoted.
**ARE GRADUATES IN DEMAND NOW?**

The most recent Graduate Labour Market Statistics\(^1\) (for Q2 2015, April–June) show that for graduates in the workforce age 16–64, although there has been a small decline (0.5%) in the employment rate to 87% since Q1 2015, it is still the highest rate of graduate employment since Q1 2008. This short-term decline is mirrored by a recent decline in non-graduate employment of 0.7%. The employment rate for young graduates, while having dipped slightly to 86.9% from a peak of 87.4% in Q4 2014, is still higher than at any other point since Q2 2008.

The 4.4% unemployment rate for young graduates is the lowest Q2 figure since Q2 2008 and compares favourably with the non-graduate unemployment rate of 9.5%. The unemployment rate for graduates in the workforce of 3.0% is also well below the corresponding figure for non-graduates (6.7%) and is the second lowest rate since Q2 2008.

Strong demand for graduates is also evident in the growth of annual median salaries for young graduates, which have seen an increase of £1,000 up to £25,000, the highest nominal median salary level on record.

The data from the most recent Association of Graduate Recruiters Annual Survey\(^2\) echoes this data, with a 13.2% increase in graduate vacancies during 2014–15 and a 3.7% increase in median salaries. High Fliers Research\(^3\) estimated an increase of 8.1% in graduate vacancies for the top 100 employers in 2015, the highest increase in more than a decade. The CBI/Pearson Education and Skills Survey for 2015\(^4\) reports that nearly nine in ten businesses (88%) have maintained or increased their levels of graduate recruitment during the past year. Just one in eight businesses (12%) have cut back on graduate recruitment, while more than twice as many (25%) report increasing their graduate intake.

Some commentators have suggested that graduates will have a wider choice in a market with high demand and employers will need to work hard to recruit the graduate talent that they need: ‘as the power shifts into the hands of graduates, it is imperative organisations are equipped with comprehensive recruitment strategies’\(^5\).

Alistair Cox, Chief Executive of recruitment firm Hays, has gone further, talking about a virtual ‘war for talent’\(^6\) in the engineering and technology sector.

In terms of current demand for graduates, the labour market is clearly out of the recession and employers could be facing a squeeze. The recession might well have not left much slack for employers to pick up to help face this squeeze because over the period 2007 to 2014 the UK economy still recruited over a million new professional (ie graduate) level jobs\(^7\).

**Answer:** The current indicators of demand for graduates are positive and point towards employers facing shortages of graduate talent.

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3. Reported on Real Business website realbusiness.co.uk ‘2015 to mark large growth in graduate jobs at UK’s top 100 employers’ 13 January 2015
5. Richard Shea, Managing Director, EMEA Search, Futurestep, quoted in realbusiness.co.uk 13 January 2015
6. Hays Global Skills Index 2015
7. Analysis of changes in the UK occupational structure 2007–14 from the Annual Population Survey, Charlie Ball, Deputy Director of Research, HECSU
WILL GRADUATES BE IN DEMAND IN THE FUTURE?

In terms of estimating future demand, it is clearly not an exact science but our analysis of four common frameworks for identifying ‘graduate’ or ‘professional’ occupations finds that, under most models, there will be a continued undersupply of graduates, relative to the number of jobs demanding them, up to 2020/22. It also identifies the impact of the upskilling of occupations where the skills requirements evolve and increase over time. None of the frameworks take this into account but it has the potential to increase demand for graduates still further, exacerbating the predicted undersupply.

Of the four frameworks, three see a supply gap of 13%, 8% and 3% by 2020/22, while one estimates an oversupply of 5%.

The CBI/Pearson Education and Skills Survey of 2015 also indicates continued strong demand for higher-level skills. In terms of business demand for different skills levels over the next three to five years, 65% of respondents to the survey indicated a demand for higher-level skills and 36% indicated a demand for intermediate skills, with negative demand for lower-level skills (as the figures are arrived at by deducting the number of firms reporting decreased demand from those reporting increased demand). This significant expected demand for higher-level skills – almost double the expected demand for intermediate skills – has been evident in all four previous surveys. In each of the surveys since 2011 demand for higher-level skills has been expected to be between 58% and 71% and for intermediate skills between 28% and 40%.

Answer: There are indications of continuing robust demand for graduates over the next few years, and continuing challenges for recruiters of graduate talent.

DO GRADUATES HAVE THE SKILLS THE ECONOMY NEEDS?

It should be noted that the challenge of meeting the needs of the economy involves one large, complex and diverse system (universities) effectively matching another larger, more complex and diverse system (employers). There will never be a complete match; skills needs will change over time and a variety of approaches will be needed to address them. Flexibility in responses, in relationships, in approaches adopted and in the approach and skill sets of graduates is vital in achieving an effective labour market. This flexibility, as well as responsiveness, is the second biggest factor cited by businesses for driving their links with universities, with 62% highlighting its importance (CBI/Pearson).

While the data indicates that there is strong demand for graduates with good starting salaries and expected strong future demand, this does not necessarily equate to complete satisfaction with the skills that graduates have. The picture of graduate skills is a complex and mixed one in part because there is no overall shared classification of both technical and generic graduate skills across universities and employers – and establishing one would be an enormous task. But ongoing dialogue is essential to matching the skills universities develop with the skills employers need.

As shown in our new report, Supply and demand for higher-level skills, there are different types of skills (technical, generic and soft skills) and differing evaluations of them. The 2013 UKCES Employer Skills Survey found that 83% of employers who had recently recruited a graduate found them ‘very well prepared’ or ‘well prepared’ for the workplace, compared to 74% for further education leavers and 66% for 17- to 18-year-old-school leavers. For those that considered their graduates poorly prepared the figures for missing skills are very low: 1% lacked literacy and numeracy skills, 5% lacked required skill or competence and 4% had a poor attitude or personality or lack motivation.

8 Universities UK (2015) Supply and demand for higher-level skills
9 UKCES (2014) Employer Skills Survey 2013: UK results
The CBI/Pearson Survey presents a somewhat different picture: 48% expressed dissatisfaction with graduates’ business and customer awareness and 43% expressed dissatisfaction with relevant work experience. However, there were some very high satisfaction rates for most other skills including use of IT (94%) and technical skills (89%) as well as basic numeracy and literacy (86% and 83%). More generic skills also scored highly, including analysis skills (81%), problem solving skills (79%) and having a positive attitude to work (75%).

So the UKCES Education and Skills Survey (ESS) shows very high levels of business satisfaction with graduates’ preparedness for the workplace, and the CBI/Pearson survey rates graduate technical skills very highly. At the same time the ESS also shows that these very technical, practical or job-specific skills are the top most attributed missing skill for each occupation classified as a ‘skill shortage vacancy’ (63% overall) and the highest reported shortage in every major Standard Occupational Classification 2010 category. So it is unclear whether these represent skills that graduates are missing or whether we are simply lacking sufficient numbers of graduates, or both. The ESS also clearly shows that it is not just professional or higher-level job categories where there are skills shortages: there are also challenges with the skilled trades job category. In other words, graduates are only part of the answer to skills shortages.

So, there are also wider indicators of skills shortages. The most recent Institute of Chartered Accountants[^10] survey of finance directors identified skill shortages as the biggest barrier to UK business growth. Compiled by recruitment group Hays and consultancy Oxford Economics, the Global Skills Index 2015[^11] has reported that skill shortages in the UK have worsened for a fourth consecutive year, now ranking among the most severe in Europe.

There is clear evidence that one of the most challenging skills areas is engineering and STEM. The UKCES survey shows some of the highest density of skill shortage vacancies in relation to professionals and skilled trades in the manufacturing and electricity, gas and water sectors. Engineering UK[^12] reports that 48.3% of engineering enterprises said hard-to-fill vacancies meant delays in new products and services and 53% of businesses expect difficulty in recruiting STEM-skilled staff in the next three years. The Royal Academy of Engineering estimates that the industry will need 830,000 new science, engineering and technology (SET) professionals (ie graduates) and 450,000 SET technicians between now and 2020,[^13] echoing the demand for both graduate skills and technical skills.

The CIPD Labour Market Survey echoes these concerns but to a lesser degree. Manufacturing and production has one of the highest proportions of hard-to-fill vacancies (24%) and engineers are the second highest role employers have difficulty filling (14%).

The Wakeham review is a very timely intervention and represents government, universities, businesses and the professions working together to understand and address the employment situation among STEM graduates and the role of accreditation courses. It mirrors the Shadbolt review, which seeks to address similar issues for computer science degrees. All partners involved in these should seek to play their role in considering and implementing the recommendations from these reviews and consider what wider lessons can be learned.

Case study: University of Lincoln School of Engineering

In 2010 Lincoln opened the first new engineering school in the UK for over 20 years, with a specific focus on developing local capacity to produce industry-ready graduates. The school is co-located with Siemens in an Engineering Hub, furthering their strong industrial partnership.

Answer: Many graduate skills are rated highly by employers, but graduates are only part of the answer to meeting employers’ skills needs.

There is a need to consider:

- how effective universities are at describing the skills of their graduates, how effective employers are at identifying their skills needs, and the role of improved university-business dialogue to continually improve this skills matching
- challenges for key sectors such as STEM; policy makers and stakeholders should seriously consider and implement the recommendations of both the Wakeham review and the Shadbolt review of computer science, and seek to learn wider lessons from these

ARE GRADUATES BEING EMPLOYED IN GRADUATE-LEVEL JOBS?

The available evidence shows strong current and future demand for graduates and high satisfaction levels for their skill levels, both technical and generic. Yet there remains the problem of graduates in non-graduate jobs and the extent to which skills mismatches are responsible for this. The recent Hays Global Skills Index rated the UK as having one of the highest skills mismatches across the countries it surveyed.

So how big is the challenge? There are various estimates of the number of graduates in non-graduate jobs. The CIPD recently put the figure as high as 58.8%, using self-reported data from 2011, the height of the recession. Some commentators have said that ‘the body of evidence points to this figure being a very significant overestimate’. The body of evidence includes the Resolution Foundation’s analysis of the Office for National Statistics Labour Force Survey which found 35.3% of ‘established graduates’ in non-graduate roles compared to 29.8% in March 2002. This points to a fairly consistent rate, which begs the question of whether the issue is cyclical and temporary or structural and long term.

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14 CIPD (2015) *Over-qualification and skills mismatch in the graduate labour market*
16 Resolution Foundation (2015) *Earnings Outlook – Graduates in non-graduate jobs*
The Destinations of Leavers from Higher Education survey\textsuperscript{17} of new graduates reports that 32% of 2013–14 graduate entrants to the labour market were in non-graduate jobs after six months and that this figure has fallen since the depths of the recession. Within 40 months of employment this figure drops to 22.6%. What is unclear is the extent to which skills mismatches are responsible for this and exactly what those skills mismatches are.

One analysis of skills mismatch by the International Labour Organisation (ILO)\textsuperscript{18} rates the UK favourably compared to many other European countries. The ILO brings together a wide range of estimates of skills mismatch as measured by over-education and found the UK workforce ranged between 13% and 36.8%. The top range was lower than ten of the other European countries in the analysis (of 27) and lower than both Germany and Italy. However, simply because skills mismatch is a common challenge across Europe, and is worse in certain other countries, this does not negate the need for action to address this in the UK.

The ILO identifies inefficiencies in career or job information as a possible contributor to skills mismatches. The European Centre for the Development of Vocational Training, CEDEFOP,\textsuperscript{19} suggests causes include individuals’ preferences and personal circumstances, temporary mismatch as people move to new jobs, low labour mobility, and inefficient recruitment and training strategies. For the UK CEDFOP reported that less than 20% of unfilled vacancies are attributed to skill deficits among applicants. Poor job design and ineffective management of talent could also contribute to the problem. A recent government research report on education, skills and productivity\textsuperscript{20} pointed to employers reducing the amount of work-based training programmes and expecting employability skills to be developed prior to taking up employment, as well as technological factors contributing to the problem. CEDFOP points to employers both complaining about the lack of experience of young applicants but also failing to provide training opportunities to for them to gain the experience required.

The area of graduates in non-graduate jobs and the role of skills mismatches is a complex and contested one, with varying estimates and varying reasons offered. However, what is clear is that there is a challenge for the UK; even some of the low estimates of graduate under-employment are too high and represent a loss of skills and a productivity drag on the economy. Universities and businesses need a better understanding of the reasons for skills mismatches and the link with graduates in non-graduate jobs – and, where possible, they need to act.

One thing that all of the reports and surveys agree on is that the answer to skills mismatches must involve closer university-business collaboration. Hays recommends closer collaboration between businesses and schools, universities and technical colleges to deliver the skills pipeline, with a role for both graduates and apprentices. The ILO calls for ‘social dialogue’ to strengthen linkages between education and training systems and the world of work. CEDFOP says that efforts to bring education and training and the labour market together should be reinforced, with strong commitment from employers.

**Case study: Sheffield RISE**

Sheffield RISE is a city-wide collaboration involving the University of Sheffield and Sheffield Hallam University to increase the number of graduates employed in small and medium-sized enterprises. The initiative takes a range of approaches including joint projects, placements, internships and consultancy.

\textsuperscript{17} HESA (2015) Destinations of Leavers from Higher Education and Longitudinal study
\textsuperscript{18} ILO (2014) Skills mismatch in Europe
\textsuperscript{19} CEDEFOP (2014) Skills mismatch: more than meets the eye
\textsuperscript{20} House of Commons (2015) Education, skills and productivity: commissioned research
Answer: The number of graduates in non-graduate jobs is not as high as some have estimated and there are numerous causes for skills mismatches. However, even the lower estimates of the number of graduates in non-graduate jobs still represent a challenge that should be addressed as a priority. The reasons for graduates working in non-graduate jobs and the impact of skills mismatches need to be understood and effective policy interventions identified and adopted. Stronger links between business and universities are a key foundation for addressing skills mismatches.

ARE GRADUATES THE ONLY ANSWER?

As well as highlighting continued demand for graduate and professional skills, our new report on Supply and demand for higher-level skills also indicates continued demand for pre-degree higher education at QCF levels 4 and 5. The highest levels of skill shortage vacancies are at both professional and technical levels.

The debate about vocational education can focus unhelpfully on the idea of a strict dividing line between specific vocational qualifications and ‘academic’ degrees. This strict dividing line is also assumed to exist between further and higher education. Framing of the debate in this way is unhelpful. It does not accurately reflect the many partnerships between higher and further education at the local level, which in many cases are being strengthened through growing devolution in England. It also ignores the fact that universities are delivering vocational qualifications and have many vocationally-focused degrees, and that colleges are delivering a considerable amount of higher education.

We suggest that there is no ‘hard’ boundary between the often assumed vocational/academic divide. Universities are delivering specific vocational qualifications. According to HESA data universities are currently the named providers of 8,917 HNCs, 7,794 HNDs and 51,138 Foundation Degrees, with many of these delivered in partnership with further education colleges.

Universities also collaborate with further education colleges in the delivery of higher-level apprenticeships and most recently have enthusiastically engaged with the delivery of degree apprenticeships. In a very short space of time almost forty universities are now ready to start the delivery of degree apprenticeships, and from no degree apprenticeships in 2014–15 there are now over 2,000 starts. Universities are partnering with a wide range of business to deliver the new degree apprenticeships and blend academic rigour with a strong workplace focus through a flexible learning model. Universities are also strongly supporting university technical colleges.

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21  HESA Student Record 2013–14
22  HEFCE (2015) ‘What is skills policy and what has it got to do with HE?’, 26 November 2015
Yet the delivery of specific vocational qualifications does not give a full picture of the extent of vocational provision in universities. The Universities UK-UKCES Forging Futures report identified a range of strategies that universities are adopting, including degree apprenticeships, to strengthen links with business and develop skills pathways. Other approaches included specific, tailored higher education courses, continuing professional development, school-leaver programmes and centres of excellence.

Case study: Aston University and Capgemini joint degree programmes

Aston has developed two full-course joint degrees in software engineering and information systems that enable Capgemini higher apprentices to progress to the second year of university study. The degrees are taught and delivered almost entirely in the workplace.

HESA data shows that almost half of university undergraduates are enrolled on science subjects (45%), with 3% studying law, 8% studying creative arts and design and 11% studying business and administrative studies; all of these are either considered a licence to practice or have strong employer and business links. Universities have strong links with business, with over two-thirds of UK businesses (68%) reporting links of some type, more than a third of businesses (35%) planning to expand their links and a further 8% planning to develop links for the first time.

Further education is also delivering increasing numbers of undergraduate degrees. Many further education colleges have long track records of delivering higher education successfully, although the number of further education colleges receiving one or more unsatisfactory judgements in Higher Education Review is worrying.

So there is strong university engagement in vocational and professional education; there are increasing numbers of undergraduate degrees being delivered in further education; and new structures, qualifications and patterns of collaboration are emerging. Universities UK will be undertaking research to try to understand the current landscape of higher-level vocational qualifications and education as a means of encouraging increased university engagement, developing effective models of collaboration with both further education and employers, and helping all involved to get a better understanding of the landscape.

Answer: Graduates and graduate skills are part of the answer to meeting employers’ skills needs but so too are pre-degree qualifications at level 4 and 5 – both professional and technical education have important roles to play.

There is a broad area of crossover between academic and vocational education, with universities delivering vocational qualifications and education and further education colleges delivering degrees, and often working in partnership.

There needs to be a better understanding of this broad area of crossover so that both higher and further education can help address employers’ skills needs, especially in relation to apprenticeships. Different and flexible models of partnership between higher education, further education and business need to be explored, developed and promoted.

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23 Universities UK and UKCES (2014) Forging Futures: building higher level skills through university and employer collaboration