AN INSIGHT INTO OCCUPATIONAL SHORTAGES IN THE UK LABOUR MARKET

Analysis by Charlie Ball / Foreword by AGCAS / Skill-shortage vacancies by industry and employer size / The regional perspective / Why vacancies are hard to fill
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Foreword
by Gemma Green, head of external relations, AGCAS

The Association of Graduate Careers Advisory Services (AGCAS) welcomes this analysis of the Employer Skills Survey and its contribution to the discourse on place-based graduate employment, particularly in relation to the balance of graduate supply and demand in the UK.

AGCAS represents 86% of university careers services. Through our members, we support the best possible career outcomes from higher education for individuals, institutions, society and the economy. A key aim of our strategic activities is to develop a deeper understanding of regional graduate labour markets and to facilitate the acquisition of this expertise – and its application to graduate outcomes and skills requirements – in order to empower our members to have informed discussions with a range of stakeholders: students, graduates, academic colleagues and employers.

AGCAS members play a pivotal role in engaging students and graduates with their local employment market through the provision of a wide range of tailored careers and employability interventions. In addition to maintaining awareness of the job roles, sectors and employers that students wish to progress into, place-based knowledge is key. A holistic understanding of regional labour markets (both locally to an institution and on a national scale), up-to-date labour market intelligence (LMI) and skills shortage awareness is central to the provision of careers education, information, advice and guidance (CEIAG).

The information in this report provides further details about occupational shortage and recruitment issues, which can be drawn on by careers services to evolve existing practices and designed in collaboration with employers to support regional skills strategies.

Each of the funded projects address challenges unique to their region and involve working collaboratively with other universities and partners including colleges, LEPs and regional employers. Using their knowledge and expertise, university careers services are leading the regional positioning of their institution in this regard.

The information in this report provides further details about occupational shortage and recruitment issues, which can be drawn on by careers services to evolve existing practices and designed in collaboration with employers to support regional skills strategies.

University careers services are key players within a broader employability ecosystem engaged in the development of students’ transferable skills and career readiness, in partnership with academic colleagues and employers. Career practitioner involvement in academic delivery is growing – this includes working with colleagues to deliver timely, effective and impactful employability interventions and impart LMI. Increasingly, employability provision is embedded in the curriculum and forms part of course design, delivery and quality assurance; a thorough understanding of both regional and national labour markets is key in this context.

Employer engagement is also a core feature of careers services’ strategic activity. AGCAS members work with graduate recruiters of all sizes – from the largest employers to local SMEs and start-ups – and from all sectors in their respective regions, facilitating opportunities for students to develop transferable skills through a variety of different routes, including workshops, work experience, internships, placements or volunteering opportunities. In the AGCAS HE Careers Services Survey 2018, heads of careers services reported the continuing delivery of employer-led skills workshops/seminars (delivered in 88% of services, with 96% of services delivering careers adviser-led skills workshops/seminars).

Furthermore, the research captured careers services’ innovation in evolving relationships with regional/local business associations/networks, district councils and Local Enterprise Partnerships (LEPs). Such relationships highlight the pivotal role universities play in their local employment market and the opportunities available through engagement of this type to enhance awareness of and address employers’ skills needs. AGCAS members are leading many of the initiatives awarded funding by the Office for Students (OfS) Industrial Strategy and Skills Challenge Competition, which aims to boost opportunities for graduates who seek work close to home.

References
Overview
by Charlie Ball, head of higher education intelligence, Prospects

There has been significant debate about the balance of graduate supply and demand in the UK. Much of the higher profile public comment, particularly from media figures, has focused on the perception that too many graduates are leaving university, particularly with degrees that are not considered to have a vocational component. Less frequently, there is discussion of shortages, usually in STEM, healthcare and, increasingly, teaching.

The data environment is not always clear. We have excellent data on graduate supply, thanks to data collection through the Higher Education Statistics Agency (HESA) and the long-running series of examinations of destinations. But the acquisition of matching high quality data on graduate demand has long been a serious concern and has made it difficult to get a fully-realised picture of some of the imbalances that take place.

For example, it appears that the UK has a shortage of IT graduates, which has long been reported by industry bodies and increasingly at a national level by the Bank of England. But at the same time, the unemployment rate for UK computing graduates is sufficiently high that the Shadbolt Review was commissioned to examine it.1 How can graduates be both in excess and demand at the same time?

Data explained
The data in this report comes from the Employer Skills Survey 2017, provided by the Department for Education (DfE) and analysed by HECSU. The UK Employer Skills Survey (ESS) is one of the largest business surveys in the world, with data collected from survey responses from over 87,000 employers.2 It is conducted by IFF on behalf of the DfE. This research provides a comprehensive source of intelligence on the skills challenges that UK employers face both within their existing workforces and when recruiting.

One in five UK employers (20%) had at least one vacancy at the time of ESS 2017 fieldwork (summer 2017), and just over one million vacancies were reported, a 9% increase on the number in 2015. Levels of recruitment activity have increased compared to 2015 in England, Scotland and, most notably, Northern Ireland. In Wales, recruitment activity was broadly unchanged.

The data analysed looks at demand for professional-level vacancies across the entire economy. This means that the data, although potentially useful to look at demand for new graduates, also covers demand for experienced individuals with the qualifications and skills required by employers. Indeed, as the report shows, some of the more difficult recruitment challenges faced by employers trying to recruit professional workers come at managerial level and so this is not merely a guide to demand for new graduates but also an indication of where supply and training needs later in individual careers may need some focus.

Note on abbreviations
Throughout this report, the abbreviation ESS refers to the Employers Skills Survey, while n.e.c. stands for ‘not elsewhere classified’ and SSVs are skill-shortage vacancies.

Acknowledgements
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- Gemma Green at AGCAS
- Natasha Hassall and Oliver Shaw at the Department for Education
- Tristram Hooley at the Institute of Student Employers
- Special thanks to Greg Wade at Universities UK.

References
2. ‘Employer’ is used here as a shorthand for ‘establishment’, the level at which employers were sampled. For more detail, please see the Technical Report.

4 SKILLS SHORTAGES IN THE UK 2019/20
There were just under 79,000 reported skill-shortage vacancies across 163 different professional occupations.
Hard-to-fill and skill-shortage vacancies

Employers reported just under 309,000 reported vacancies in 169 different professional occupations. To put this into perspective, in 2017, just over 184,000 UK-domiciled newly qualified first-degree graduates are known to have entered the UK workforce at any level of job – including jobs that did not require a degree – and just under 280,000 leavers from higher education at any level from HND to PhD entered the UK workforce.

An employer reported a vacancy as ‘hard to fill’ if they found it difficult to fill for any reason.

One third (33%) of vacancies were considered hard to fill, in line with previous years. There were over 106,000 reported hard-to-fill vacancies at professional level, across 165 different occupations as measured using 4-digit Standard Occupational Classification (SOC) codes.

Vacancies that employers found hard to fill specifically because applicants lacked relevant skills, qualifications or experience are termed ‘skill-shortage vacancies’ (SSVs). While the proportion of employers with SSVs was unchanged from 2015 at 6%, in volume terms the number of such vacancies increased by 8%, from 209,000 to 226,000 (similar to the increase in overall vacancy numbers).

Skill-shortage vacancies accounted for 22% of all vacancies in the UK (in line with the 23% density reported in 2015). There were just under 79,000 reported SSVs across 163 different professional occupations.

1. Most vacancies at professional level

The first section examines those professional-level occupations that were reported by employers to have experienced the most vacancies during the reporting period.

‘Professional level’ means occupations classed under Standard Occupational Classification (SOC) 2010 in major groups 1, 2 and 3 – managerial, professional and associate professional. This is also the criterion used by the Office for Students (OFS) to identify skilled employment in higher education metrics.

This data does not examine how difficult these roles are to fill, it simply looks at how many vacancies ESS respondents reported in 2017.

Nursing comes at the top of the list. Second is ‘HR and industrial relations professionals’. In actual fact this almost certainly refers to recruitment professionals, who are in considerable demand in the graduate economy at present as businesses turn to recruitment specialists to address recruitment difficulties. The importance of business services to the graduate economy is shown by the presence of sales and marketing roles towards the top of the list, and the tech industry is also represented in the form of programming roles, IT support and specialist and generalist engineering.

- Nurses
- Human resources and industrial relations officers
- Business sales executives
- Welfare and housing associate professionals
- IT user support technicians
- Marketing associate professionals
- Programmers and software development professionals
- Engineering professionals n.e.c (covering niche and specialist engineers)
- Sales accounts and business development managers
- Managers and directors in retail and wholesale
- Medical practitioners
- Solicitors
- Vocational and industrial trainers and instructors
- Primary and nursery education teaching professionals
- Business and related associate professionals n.e.c. (including people with generic jobs titles)
- Youth and community workers
- Chartered and certified accountants
- Legal associate professionals
- Teaching and other educational professionals n.e.c. (including SEN and specialist tutors)
- Design and development engineers
- Secondary education teaching professionals
- Estate agents and auctioneers
- Financial managers and directors
- Sports coaches, instructors and officials
- Business and financial project management professionals
- Web design and development professionals
- Finance and investment analysts and advisers
- Further education teaching professionals
- Legal professionals n.e.c.
- Graphic designers
- Science, engineering and production technicians n.e.c.
- Management consultants and business analysts
- Product, clothing and related designers
- Natural and social science professionals n.e.c.
- Production managers and directors in manufacturing
- Conference and exhibition managers and organisers
- Architects
- IT operations technicians
- Social workers
- Financial accounts managers
- Production managers and directors in construction
- Chartered surveyors
- Public relations professionals

This list of vacancies is not dissimilar to the list of most common jobs for new graduates.

The top 10 jobs for new graduates from 2016/17 were as follows:

- Nurses
- Marketing associate professionals
- Medical practitioners
- Primary and nursery teachers
- Business and related associate professionals n.e.c. (including people with generic jobs titles)
- Programmers and software developers
- Finance analysts and advisers
- Human resources, recruitment industrial relations officers
- Chartered and certified accountants
- Welfare and housing associate professionals

This data is from HESA’s Destinations of Leavers from Higher Education 2016/17. All of these also appear on the previous list of occupations reported by employers as having the most vacancies, a not unexpected finding but one that demonstrates the importance of new graduate entrants to the skilled labour market.

When we consider which roles have the highest number of vacancies, this does not always correlate to how easy a position is to fill. Medical radiographers reported a relatively small number of vacancies (too small to report at a statistical level), but all employers who did report a radiography vacancy reported that it was hard to fill. This strongly correlates with anecdotal data, but we do not report radiography anywhere else as the numbers as a whole are not large enough to be reliable.

Other occupations with a small number of vacancies but a high level of hard-to-fill vacancies that may need to be monitored include podiatry, dispensing opticians and aircraft pilots and flight engineers. Insurance underwriting had a large number of vacancies and a large proportion of hard-to-fill vacancies, but a very small number of recruiting establishments. This occupation is reported in some specific sections of the report but we may need a wider view of the industry to establish quite how and where there are issues.
2. Largest number of hard-to-fill vacancies

The next analysis examines those vacancies reporting the largest number of hard-to-fill positions. An employer reported a vacancy as hard to fill if they found it difficult to fill for any reason. This is a subjective measure, and if a vacancy was considered hard to fill, it should not be assumed that it was not ultimately filled, or that if it was, it was not filled by someone considered suitably skilled and qualified for the position. It is a measure showing that, in the judgement of the employer, the vacancy was difficult to fill. The ESS also asks a number of questions about why this is, and some of that data is examined later in the report. The professional-level roles showing the largest number of hard-to-fill vacancies were as follows:

- Nurses
- Programmers and software development professionals
- Human resources and industrial relations officers
- Medical practitioners
- Welfare and housing associate professionals
- Business sales executives
- IT user support technicians
- Sales accounts and business development managers
- Marketing associate professionals
- Engineering professionals n.e.c.
- Design and development engineers
- Welfare and housing associate professionals
- Web design and development professionals
- Chartered and certified accountants
- Medical practitioners
- Teaching and other educational professionals

3. Most skill-shortage vacancies (SSVs)

Vacancies that employers find hard-to-fill due to applicants lacking relevant skills, qualifications or experience are termed ‘skill-shortage vacancies’ (SSVs). Graduate occupations experiencing the most skill shortage vacancies were:

- Nurses
- Programmers and software development professionals
- Human resources and industrial relations officers
- IT user support technicians
- Business sales executives
- Sales accounts and business development managers
- Engineering professionals n.e.c.
- Marketing associate professionals
- Design and development engineers
- Welfare and housing associate professionals
- Web design and development professionals
- Chartered and certified accountants
- Medical practitioners
- Teaching and other educational

4. Hardest professional-level vacancies to fill

The previous measures are of interest in examining the prevalence of recruitment difficulties, but don’t examine their intensity. An occupation that does not have a relatively large number of vacancies may have an unusually large proportion of hard to fill vacancies, suggesting a specific issue with supply and demand. The following roles are the hardest to fill at graduate level, in that they have the highest proportion of all vacancies considered to be hard to fill.

As the previous SSVs list suggests, there appears to be a particular issue filling medical vacancies, and this is very much in line with warnings from the sector itself. At least half of vacancies in all of these occupations were hard to fill. All occupations on this list were health, engineering, construction or IT roles, and this is in line with reports from the Bank of England and Chambers of Commerce, which consistently signal roles in these areas as a persistent recruitment issue.

- Medical practitioners: 93.0%
- Veterinarians: 86.8%
- Pharmacists: 72.6%
- Nurses: 72.1%
- Electronics engineers: 63.3%
- Electrical engineers: 58.8%
- Civil engineers: 57.9%
- Quantity surveyors: 56.6%
- Web design and development professionals: 54.1%
- Design and development engineers: 53.9%
- Environment professionals: 52.6%
- Pharmacists: 52.5%
- Estimators, valuers and assessors: 52.2%
- Programmers and software development professionals: 50.0%

The following chart is of those roles with the highest proportion of vacancies that are reported as due to skills shortage. This is a similar list to the previous one, but with the engineering and construction roles higher up the list. The previous list is of vacancies that are hard to fill, whereas this examines roles where there are particular issues with applicant skills and supply. With the exception of photographers and AV operators, all the roles showing more than 40% SSVs are in STEM.

<table>
<thead>
<tr>
<th>Role</th>
<th>Proportion of Vacancies</th>
</tr>
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<tbody>
<tr>
<td>Electronics engineers</td>
<td>59.8%</td>
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<tr>
<td>Civil engineers</td>
<td>55.4%</td>
</tr>
<tr>
<td>Design and development engineers</td>
<td>49.7%</td>
</tr>
<tr>
<td>Quantity surveyors</td>
<td>49.6%</td>
</tr>
<tr>
<td>Veterinarians</td>
<td>49.0%</td>
</tr>
<tr>
<td>Programmers and software development</td>
<td>48.1%</td>
</tr>
<tr>
<td>Environmental professionals</td>
<td>47.9%</td>
</tr>
<tr>
<td>Electrical engineers</td>
<td>47.2%</td>
</tr>
<tr>
<td>Web design and development professionals</td>
<td>45.7%</td>
</tr>
<tr>
<td>Photographers, audio-visual and</td>
<td>41.6%</td>
</tr>
<tr>
<td>broadcasting equipment operators</td>
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</tbody>
</table>

More than half the hard-to-fill vacancies in the following jobs were because employers reported there were not enough applicants, signalling a specific issue of supply to the labour market.

- Midwives
- Insurance underwriters
- Biological scientists and biochemists
- Chartered architectural technologists
- NCOs and other ranks
- Health professionals n.e.c.
- Medical practitioners
- Veterinarians
- Financial managers and directors
- Electrical and electronics technicians
- Nurses
- Managers and directors in transport and distribution
- Secondary education teaching professionals

This is a more diverse group of (sometimes) smaller occupations, in terms of numbers, which may be flagging up specific niches where we either may not have enough graduate entrants to the market, or where industries are not competing well for available graduates.
5. Industries reporting graduate recruitment issues
The following industries report a particularly large number of hard-to-fill vacancies at professional level, and the data covers those roles particularly hard to recruit into the industry. Note that these industries were chosen for sample size – the sample is not large enough to do this effectively for every industry. This analysis might help to target specific support to particular industries.
This section briefly examines graduate shortages by business size: SMEs or large business. Most businesses are SMEs, but most graduates work for large employers, with most hospitals counted in the latter category. As a consequence, SMEs experience more and wider shortages of graduates. SMEs experience shortages of nurses much like large businesses do, but rather than at NHS hospitals, these are largely in the care sector and in private health. SMEs experience a particularly serious issue recruiting IT staff, recruitment and sales professionals and shortages of these sought-after professionals appear less intense at large businesses. This suggests that the larger firms may be outcompeting smaller ones for in-demand workers and this may be something to examine further.

<table>
<thead>
<tr>
<th>SME SHORTAGES</th>
<th>LARGE EMPLOYER SHORTAGES</th>
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<tbody>
<tr>
<td>Nurses</td>
<td>Nurses</td>
</tr>
<tr>
<td>Programmers and software development</td>
<td>Medical practitioners</td>
</tr>
<tr>
<td>Human resources and industrial relations</td>
<td>Insurance underwriters</td>
</tr>
<tr>
<td>Business sales executives</td>
<td>Engineering professionals n.e.c.</td>
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<tr>
<td>NCOs and other ranks n.e.c.</td>
<td>Welfare and housing associates</td>
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<tr>
<td>Sales accounts and business development</td>
<td>Design and development engineers</td>
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<tr>
<td>Welfare and housing associate professionals</td>
<td>IT user support technicians</td>
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<tr>
<td>Marketing associate professionals</td>
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<tr>
<td>Veterinarians</td>
<td></td>
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<tr>
<td>Chartered and certified accountants</td>
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<tr>
<td>Primary and nursery education teaching</td>
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<tr>
<td>Graphic designers</td>
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<tr>
<td>Web design and development professionals</td>
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<tr>
<td>Finance and investment analysts and advisers</td>
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<tr>
<td>Youth and community workers</td>
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<td>Draughts persons</td>
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<tr>
<td>Secondary education teaching professionals</td>
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<tr>
<td>Business and financial project management</td>
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<tr>
<td>Engineering professionals n.e.c.</td>
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<tr>
<td>Teaching and other educational</td>
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<tr>
<td>Managers and directors in retail and</td>
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<tr>
<td>Wholesale</td>
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<tr>
<td>Design and development engineers</td>
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<tr>
<td>Product, clothing and related designers</td>
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<tr>
<td>IT user support technicians</td>
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<tr>
<td>Civil engineers</td>
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<tr>
<td>Chartered surveyors</td>
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<tr>
<td>Medical practitioners</td>
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<tr>
<td>Sports coaches, instructors and officials</td>
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<tr>
<td>Restaurant and catering establishment</td>
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<tr>
<td>Managers and proprietors</td>
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<tr>
<td>Vocational and industrial trainers and</td>
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<tr>
<td>instructors</td>
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<tr>
<td>Estimators, valuers and assessors</td>
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<tr>
<td>Quantity surveyors</td>
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</table>
The regional perspective

The UK is not one homogenous labour market, nor are workers infinitely mobile, and as a consequence local shortages exist.
The previous commentary examined the UK picture. Of course, the UK is not one homogenous labour market, nor are workers infinitely mobile, and as a consequence local shortages exist. This section examines regions of the UK, and looks at those vacancies reported as hard to fill — for shorthand, these are referred to as ‘shortage’, although as previously stated a vacancy counted as hard to fill was not necessarily left unfilled, and nor was it necessarily filled by an individual who did not meet employer requirements. This section examines shortages by volume – it doesn’t reflect intensity of shortage.

### England

#### 1. East Midlands

This relatively short list of occupations is more a reflection of the size of the jobs market. Like most regions, nurses have the most HTF vacancies, but NCOs, draughtspersons and product and clothing designers are particular to the region.

- Nurses
- NCOs and other ranks
- Draughtspersons
- Human resources and industrial relations officers
- Product, clothing and related designers
- Business sales executives
- Veterinarians
- Finance and investment analysts and advisers
- Programmers and software development professionals
- Architects

#### 2. East of England

The region has the longest list of shortage occupations. It is characterised by a wide and dispersed graduate labour market with significant rural land and no individual large urban centre. Local salaries can be relatively low and cost of living high. London is nearby. This makes recruitment and retention, particularly for SMEs, a challenge. Many of the shortage occupations locally are in national shortage, with health, engineering and construction featuring prominently. This data suggests that the region could benefit from a clear focus on local graduate labour market issues.

- Medical practitioners
- Nurses
- Design and development engineers
- Veterinarians
- Business sales executives
- Solicitors
- Quality assurance technicians
- Programmers and software development professionals
- Welfare and housing associate professionals n.e.c.
- Sales accounts and business development managers
- Social and humanities scientists
- Quantity surveyors
- Human resources and industrial relations officers
- Finance and investment analysts and advisers
- Primary and nursery education teaching professionals
- Estimators, valuers and assessors
- Mechanical engineers
- Graphic designers
- Estate agents and auctioneers
- Marketing associate professionals
- Pharmacists
- Secondary education teaching professionals
- Vocational and industrial trainers and instructors
- Production managers and directors in construction
- Town planning officers

#### 3. London

London is, of course, a large and business-oriented labour market and so it is not surprising that the capital’s appetite for business support professionals in IT, recruitment, consultancy, law, sales and marketing is reflected by shortages in those occupations. Although the list of occupations is not as long as in the East of England, those professions reporting shortages are reporting large numbers.

- Programmers and software development professionals
- Human resources and industrial relations officers
- Management consultants and business analysts
- Legal professionals n.e.c.
- Sales accounts and business development managers
- Marketing associate professionals
- Nurses
- IT user support technicians
- Secondary education teaching professionals
- Human resource managers and directors
- Finance and investment analysts and advisers
- Business, research and administrative professionals n.e.c.
- Teaching and other educational professionals n.e.c.
- Web design and development professionals
- Primary and nursery education teaching professionals
- Photographers, audio-visual and broadcasting equipment operators
- Chartered and certified accountants
- Business sales executives
- Product, clothing and related designers
- Quality assurance and regulatory professionals
- Science, engineering and production technicians n.e.c.
- Arts officers, producers and directors

#### 4. North East

The North East’s relatively short list of professions in shortage reflects the size of its labour market. The top four shortages seem to be particularly intense and a closer examination of the data is likely to reveal locally significant shortages. It is also notable that the region seems to struggle to develop and recruit graphic designers and that may require some attention.

- Nurses
- Medical practitioners
- Human resources and industrial relations officers
- Programmers and software development professionals
- Graphic designers
- Design and development managers
- Probation officers
- Solicitors

#### 5. North West

Although the list of occupations is not as long as some other regions, some of these shortages are particularly serious; the region has more hard-to-fill vacancies in sales than any other and it also has one of the most serious shortages of nurses, recruitment professionals, housing professionals, youth workers and accountants. This is likely a consequence of the rapid expansion of business-oriented jobs markets in Manchester, Liverpool and Preston allied to issues with housing and welfare in some of the less affluent parts of the region.

- Nurses
- Medical practitioners
- Human resources and industrial relations officers
- Sales accounts and business development managers
- Programmers and software development professionals
- Construction project managers and related professionals
- Welfare and housing associate professionals n.e.c.
- Youth and community workers
- Chartered and certified accountants
- Business sales executives
- Business and related associate professionals n.e.c.
- Marketing associate professionals
THE REGIONAL PERSPECTIVE: OCCUPATIONAL SHORTAGES BY REGION

England

6. South East
This is a large region with a strong graduate labour market and it is attractive to workers from around the country. As a consequence the list of significant occupational shortages is not particularly long. However, the region has the largest number of shortages in the UK in each of the top four occupations on the list: nursing, IT support, insurance and housing. UK shortages of IT support and insurance professionals are particularly concentrated in the region.

- Nurses
- IT user support technicians
- Insurance underwriters
- Welfare and housing associate professionals n.e.c.
- Programmers and software development professionals
- Human resources and industrial relations officers
- Chartered and certified accountants
- Teaching and other educational professionals n.e.c.
- Sports coaches, instructors and officials
- Restaurant and catering establishment managers and proprietors
- Marketing associate professionals
- Youth and community workers
- Information technology and telecommunications professionals
- Web design and development professionals
- Chartered surveyors

7. South West
The region has a relatively small graduate labour market, but has a particular shortage of solicitors and legal professionals, much the most serious in the UK in both roles. It may be advisable to examine the local legal labour market in more detail – in terms of size, composition and location in order to address these issues.

- Nurses
- Solicitors
- Medical practitioners
- Programmers and software development professionals
- Business and financial project management professionals
- Marketing associate professionals
- Veterinarians
- Sales accounts and business development managers

- Legal associate professionals
- Managers and directors in retail and wholesale
- Teaching and other educational professionals n.e.c.
- Sports coaches, instructors and officials

8. West Midlands
The region has particularly notable engineering shortages and in several of the disciplines listed has more than any other region, reflecting both a local strength in manufacturing and engineering, and the difficulty of filling roles in these positions. It also has a particular shortage of sales staff.

- Nurses
- Engineering professionals n.e.c.
- Human resources and industrial relations officers
- Programmers and software development professionals
- Business sales executives
- Further education teaching professionals
- Primary and nursery education teaching professionals
- Welfare and housing associate professionals n.e.c.
- Environmental health professionals
- Design and development engineers
- Vocational and industrial trainers and instructors
- Sales accounts and business development managers
- Chartered and certified accountants
- Managers and directors in retail and wholesale
- Secondary education teaching professionals
- Chartered surveyors
- Electronic engineers

9. Yorkshire
Yorkshire appears to be reporting fewer and less intense shortages than other regions of England although they have particular issues with electrical engineers, IT operations technicians and child and early years officers.

- Nurses
- Electrical engineers
- Marketing associate professionals
- Engineering professionals n.e.c.
- Business sales executives
- Business and financial project management professionals
- Social workers
- Welfare and housing associate professionals n.e.c.
- IT operations technicians
- Finance and investment analysts and advisers
- Child and early years officers

Wales
Wales is characterised by largely small, dispersed and rural professional labour markets outside the south of the country, with one nationally strong professional jobs market in Cardiff. As a consequence, over half the hard-to-fill vacancies at professional level in Wales were in Wales South.

1. Wales North
- Nurses
- Information technology and telecommunications professionals n.e.c.
- Business and related associate professionals n.e.c.
- Engineering professionals n.e.c.
- Sport coaches, instructors and officials
- Business sales executives
- Environment professionals
- Civil engineers
- Electrical engineers
- Building and civil engineering technicians
- Sales accounts and business development managers
- IT user support technicians
- Medical practitioners
- Teaching and other education professionals n.e.c.

2. Wales Mid
- Veterinarians
- Design and development engineers
- Nurses

3. Wales South
- Managers and directors in retail and wholesale
- Nurses
- Business sales executives
- Product, clothing and related designers
- Engineering professionals n.e.c.
- Web design and development professionals
- Architectural and town planning technicians
- Fitness instructors
- Sales accounts and business development managers
- Graphic designers
- Quantity surveyors
- Medical practitioners
- Chartered surveyors
- IT operations technicians
- Protective service associate professionals n.e.c.
- IT user support technicians
- Production managers and directors in construction
- Physiotherapists
- Authors, writers and translators
- Mechanical engineers
- Vocational and industrial trainers and instructors

4. Wales South West
- Engineering professional n.e.c.
- Production managers and directors in manufacturing
- Nurses
- Sales accounts and business development managers
- Programmers and software development professionals
- Business sales executives

12 SKILLS SHORTAGES IN THE UK 2019/20
The professional labour market in Scotland is dominated by Glasgow and Edinburgh, with Aberdeen and Dundee regionally important but significantly smaller. Aberdeen City and Shire, Shire, and Forth Valley are three small labour markets with the main labour market centres based around Aberdeen, Ayr and Stirling/Falkirk. Much of the issues are around public sector recruitment, although Aberdeen has some supply concerns into business services.

1. **Aberdeen City and Shire**
   - Managers and directors in retail and wholesale
   - Nurses
   - Youth and community workers
   - Vocational and industrial trainers and instructors
   - Business sales executives
   - Marketing associate professionals

2. **Ayrshire**
   - Housing officers
   - Property, housing and estate managers
   - Nurses

3. **Forth Valley**
   - Veterinarians
   - Nurses
   - Medical practitioners

Three more small markets are Highlands and Islands, South of Scotland, and Tayside. Dundee, a regionally important professional labour market, is in Tayside and although public sector roles are important the two main shortages are linked to the area’s tech industry.

Highlands and Islands and South of Scotland are large, dispersed and very rural labour markets. Highlands and Islands does have higher education provision but there are no universities with a main base in South of Scotland – it does have a campus of the Scottish Rural University College. Possibly as a consequence, the two regions see more graduate shortage than some more populous regions of Scotland.

4. **Highlands and Islands SIP**
   - Fire service officers (watch manager and below)
   - Civil engineers
   - Photographers, audio-visual and broadcasting equipment operators
   - Secondary education teaching professionals
   - Medical practitioners
   - Design and development engineers
   - Public services associate professionals
   - Finance and investment analysts and advisers

5. **South of Scotland**
   - Fire service officers (watch manager and below)
   - Pharmacists
   - Managers and proprietors in agriculture and horticulture
   - Engineering professionals n.e.c.
   - Medical practitioners
   - Business sales executives

6. **Tayside**
   - Mechanical engineers
   - Graphic designers
   - Nurses
   - Primary and nursery education teaching professionals
   - Secondary education teaching professionals
   - Welfare and housing associate professionals n.e.c.

7. **Edinburgh, Fife and the Lothian**
   - Edinburgh, one of the largest and most diverse (in occupational terms) professional labour markets in the UK, dominates this region. The occupational shortage list reflects the strength and breadth of Edinburgh’s job market, mixing public sector and private sector vacancies, the latter particularly in engineering, construction, tech and business services – all strong in the city.
   - Web design and development professionals
   - Welfare and housing associate professionals n.e.c.
   - Nurses
   - Chartered surveyors
   - Human resources and industrial relations officers
   - Engineering professionals n.e.c.
   - Programmers and software development professionals
   - Electrical engineers
   - Solicitors
   - Finance and investment analysts and advisers
   - Primary and nursery education teaching professionals
   - Mechanical engineers
   - Business sales executives
   - Social services managers and directors
   - Civil engineers
   - Managers and directors in retail and wholesale
   - Secondary education teaching professionals
   - Graphic designers
   - Electronics engineers

8. **Glasgow and the Clyde Valley**
   - Glasgow’s professional level labour market is larger and broader still than Edinburgh’s and the list of hard-to-fill vacancies correspondingly longer. In particular, the most significant shortage occupations showed many more hard-to-fill vacancies than any other roles elsewhere in Scotland. Welfare and housing roles are among the hardest to fill at professional level in the UK and the level of hard-to-fill vacancies in housing in Glasgow vies with the South East of England (the whole region) for the most serious in the UK.
   - Welfare and housing associate professionals n.e.c.
   - Nurses
   - Graphic designers
   - Production managers and directors in construction
   - Engineering professionals n.e.c.
   - Secondary education teaching professionals
   - Quantity surveyors
   - Natural and social science professionals n.e.c.
   - Primary and nursery education teaching professionals
   - Sales accounts and business development managers
   - Human resources and industrial relations officers
   - Finance and investment analysts and advisers
   - Managers and directors in retail and wholesale
   - Civil engineers
   - Insurance underwriters
   - Web design and development professionals
   - Design and development engineers
   - Youth and community workers
   - Business sales executives
   - Information technology and telecommunications professionals n.e.c.
   - Marketing associate professionals
   - IT user support technicians
   - Financial and accounting technicians
   - Higher education teaching professionals
   - Electrical engineers
   - Quality assurance technicians
   - Purchasing managers and directors
   - Legal associate professionals

**Northern Ireland**

This is a relatively short list at professional level, due to the relatively small size of the labour market. Most professional shortage is experienced in Belfast, but the shortage of nurses is greater in the south east of Northern Ireland, and the shortage of social workers in the south west.

- Nurses
- Higher education teaching professionals
- Social workers
- Welfare and housing associate professionals n.e.c.
- IT business analysts, architects and systems designers
- Civil engineers
- Programmers and software development professionals
For over half of managerial vacancies, employers found it hard to recruit applicants able to demonstrate the ability to manage.

Why vacancies are hard to fill
What makes positions hard to fill?

Employers were asked, in their view, why their hard-to-fill vacancies had been difficult to recruit into. Respondents were able to give more than one response to each of these questions, and this gives us a rich picture of the issues facing recruiters.

1. Managers
Skill-shortage vacancies are a particular issue at managerial level, with applicants also often failing to demonstrate sufficient work experience. But lack of applicants and lack of interest in vacancies are also an issue.

<table>
<thead>
<tr>
<th>WHY MANAGERIAL POSITIONS ARE HARD TO FILL</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low number of applicants with the required skills</td>
<td>43.0%</td>
</tr>
<tr>
<td>Lack of work experience the company demands</td>
<td>28.6%</td>
</tr>
<tr>
<td>Low number of applicants generally</td>
<td>19.3%</td>
</tr>
<tr>
<td>Not enough people interested in doing this type of job</td>
<td>16.5%</td>
</tr>
<tr>
<td>Low no. of applicants with required attitude, motivation, personality</td>
<td>16.5%</td>
</tr>
<tr>
<td>Lack of qualifications the company demands</td>
<td>12.6%</td>
</tr>
<tr>
<td>Remote location/poor public transport</td>
<td>12.6%</td>
</tr>
<tr>
<td>Poor terms and conditions (e.g. pay) offered for post</td>
<td>12.4%</td>
</tr>
<tr>
<td>Job entails shift work/unsociable hours</td>
<td>9.8%</td>
</tr>
<tr>
<td>Too much competition from other employers</td>
<td>7.9%</td>
</tr>
<tr>
<td>Poor career progression/lack of prospects</td>
<td>3.3%</td>
</tr>
<tr>
<td>Lack of funding for the position</td>
<td>3.1%</td>
</tr>
<tr>
<td>Low number of suitable applicants inc. age of applicants</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

2. Professionals
Professionals show a similar pattern, but there are fewer issues with insufficient work experience and more with applicant shortage. Competition from other employers and lack of interest in specific roles are also more important for this group than for others. This is perhaps not a surprise – all the occupations listed as having the highest proportions of SSVs and hard-to-fill vacancies are at this specific level. Locational issues are also more important for this group – the rest of the data suggests many professionals are in occupations experiencing demand and so there is less imperative for individuals to move to a location that may not suit them.

<table>
<thead>
<tr>
<th>WHY PROFESSIONAL POSITIONS ARE HARD TO FILL</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low number of applicants with the required skills</td>
<td>46.0%</td>
</tr>
<tr>
<td>Low number of applicants generally</td>
<td>28.4%</td>
</tr>
<tr>
<td>Not enough people interested in doing this type of job</td>
<td>19.6%</td>
</tr>
<tr>
<td>Lack of work experience the company demands</td>
<td>18.1%</td>
</tr>
<tr>
<td>Lack of qualifications the company demands</td>
<td>17.3%</td>
</tr>
<tr>
<td>Remote location/poor public transport</td>
<td>12.8%</td>
</tr>
<tr>
<td>Too much competition from other employers</td>
<td>12.7%</td>
</tr>
<tr>
<td>Poor terms and conditions (e.g. pay) offered for post</td>
<td>11.1%</td>
</tr>
<tr>
<td>Low number of applicants with required attitude, motivation, personality</td>
<td>8.1%</td>
</tr>
<tr>
<td>Job entails shift work/unsociable hours</td>
<td>3.6%</td>
</tr>
<tr>
<td>Poor career progression/lack of prospects</td>
<td>3.0%</td>
</tr>
<tr>
<td>Seasonal work</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

3. Associate professionals
Skills shortages again are the main issue for associate professionals and were at the highest intensity for the group, but work experience is again a significant factor, with applicant shortage also important.

<table>
<thead>
<tr>
<th>WHY ASSOCIATE PROFESSIONAL POSITIONS ARE HARD TO FILL</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low number of applicants with the required skills</td>
<td>46.5%</td>
</tr>
<tr>
<td>Lack of work experience the company demands</td>
<td>27.6%</td>
</tr>
<tr>
<td>Low number of applicants generally</td>
<td>17.3%</td>
</tr>
<tr>
<td>Not enough people interested in doing this type of job</td>
<td>16.2%</td>
</tr>
<tr>
<td>Lack of qualifications the company demands</td>
<td>16.0%</td>
</tr>
<tr>
<td>Low no. of applicants with required attitude, motivation, personality</td>
<td>13.1%</td>
</tr>
<tr>
<td>Poor terms and conditions (e.g. pay) offered for post</td>
<td>10.4%</td>
</tr>
<tr>
<td>Remote location/poor public transport</td>
<td>9.6%</td>
</tr>
<tr>
<td>Too much competition from other employers</td>
<td>9.1%</td>
</tr>
<tr>
<td>Job entails shift work/unsociable hours</td>
<td>4.7%</td>
</tr>
<tr>
<td>Poor career progression/lack of prospects</td>
<td>1.5%</td>
</tr>
<tr>
<td>Seasonal work</td>
<td>0.9%</td>
</tr>
</tbody>
</table>
Skills reported as being hard to obtain from applicants

Employers were asked which skills they found particularly hard to obtain for hard-to-fill vacancies (not all vacancies in general), grouped into technical/practical skills and soft skills. Employers could give multiple responses.

1. Managers

It is striking that for over half of managerial vacancies, employers found it hard to recruit applicants able to demonstrate the ability to manage. At the top of the list were issues in finding specialist skills for the roles, but over half of all respondents reported issues finding problem-solving skills. Product knowledge and persuasion and influencing skills were also hard to find and soft skills in general appear to have been an issue, with a number of key skills – instructing, teaching and training, time management, setting objectives and planning, and persuading and influencing all running at being difficult to obtain for over 40% of vacancies.

### TECHNICAL/PRACTICAL SKILLS FOUND DIFFICULT TO OBTAIN FROM APPLICANTS FOR MANAGER

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist skills or knowledge needed to perform the role</td>
<td>67.2%</td>
</tr>
<tr>
<td>Solving complex problems requiring a solution specific to the situation</td>
<td>52.2%</td>
</tr>
<tr>
<td>Knowledge of products and services offered by your organisation and organisations like yours</td>
<td>45.8%</td>
</tr>
<tr>
<td>Knowledge of how your organisation works</td>
<td>42.5%</td>
</tr>
<tr>
<td>More complex numerical or statistical skills and understanding</td>
<td>31.1%</td>
</tr>
<tr>
<td>Computer literacy/basic IT skills</td>
<td>23.1%</td>
</tr>
<tr>
<td>Reading and understanding instructions, guidelines, manuals or reports</td>
<td>22.4%</td>
</tr>
<tr>
<td>Writing instructions, guidelines, manuals or reports</td>
<td>22.4%</td>
</tr>
<tr>
<td>Basic numerical skills and understanding</td>
<td>21.4%</td>
</tr>
<tr>
<td>Advanced or specialist IT skills</td>
<td>20.1%</td>
</tr>
<tr>
<td>Adapting to new equipment or materials</td>
<td>18.7%</td>
</tr>
<tr>
<td>Communicating in a foreign language</td>
<td>12.7%</td>
</tr>
<tr>
<td>Manual dexterity</td>
<td>8.0%</td>
</tr>
</tbody>
</table>

### SOFT SKILLS FOUND DIFFICULT TO OBTAIN FROM APPLICANTS FOR MANAGER

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing or motivating other staff</td>
<td>54.8%</td>
</tr>
<tr>
<td>Persuading or influencing others</td>
<td>47.8%</td>
</tr>
<tr>
<td>Ability to manage own time and prioritise own tasks</td>
<td>43.5%</td>
</tr>
<tr>
<td>Instructing, teaching or training people</td>
<td>42.1%</td>
</tr>
<tr>
<td>Setting objectives for others and planning human, financial and other resources</td>
<td>41.1%</td>
</tr>
<tr>
<td>Customer handling skills</td>
<td>38.8%</td>
</tr>
<tr>
<td>Managing their own feelings, or handling the feelings of others</td>
<td>38.8%</td>
</tr>
<tr>
<td>Team working</td>
<td>38.5%</td>
</tr>
<tr>
<td>Sales skills</td>
<td>32.1%</td>
</tr>
<tr>
<td>Making speeches or presentations</td>
<td>23.1%</td>
</tr>
<tr>
<td>None of the above</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

2. Professionals

Specialist knowledge was again the hardest skill to find, but in general skills shortages were not as intense as for managers, with no other skill being reported by more than half of respondents and problem solving reported for 40.5% of vacancies. Soft skills in particular appear to be less of an issue for professional applicants than for managerial applicants. Time management and prioritisation was the skill found hardest to obtain from professional applicants.

### TECHNICAL/PRACTICAL SKILLS FOUND DIFFICULT TO OBTAIN FROM APPLICANTS FOR PROFESSIONALS

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist skills or knowledge needed to perform the role</td>
<td>69.7%</td>
</tr>
<tr>
<td>Solving complex problems requiring a solution specific to the situation</td>
<td>40.5%</td>
</tr>
<tr>
<td>Advanced or specialist IT skills</td>
<td>30.8%</td>
</tr>
<tr>
<td>Knowledge of products and services offered by your organisation and organisations like yours</td>
<td>30.6%</td>
</tr>
<tr>
<td>More complex numerical or statistical skills and understanding</td>
<td>24.9%</td>
</tr>
<tr>
<td>Knowledge of how your organisation works</td>
<td>24.2%</td>
</tr>
<tr>
<td>Writing instructions, guidelines, manuals or reports</td>
<td>18.3%</td>
</tr>
<tr>
<td>Reading and understanding instructions, guidelines, manuals or reports</td>
<td>16.0%</td>
</tr>
<tr>
<td>Computer literacy/basic IT skills</td>
<td>15.3%</td>
</tr>
<tr>
<td>Basic numerical skills and understanding</td>
<td>12.0%</td>
</tr>
<tr>
<td>Communicating in a foreign language</td>
<td>11.9%</td>
</tr>
<tr>
<td>Adapting to new equipment or materials</td>
<td>11.8%</td>
</tr>
<tr>
<td>Manual dexterity</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

### SOFT SKILLS FOUND DIFFICULT TO OBTAIN FROM APPLICANTS FOR PROFESSIONALS

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to manage own time and prioritise own tasks</td>
<td>36.2%</td>
</tr>
<tr>
<td>None of the above</td>
<td>33.2%</td>
</tr>
<tr>
<td>Managing or motivating other staff</td>
<td>28.7%</td>
</tr>
<tr>
<td>Customer handling skills</td>
<td>25.4%</td>
</tr>
<tr>
<td>Team working</td>
<td>25.2%</td>
</tr>
<tr>
<td>Managing their own feelings, or handling the feelings of others</td>
<td>24.9%</td>
</tr>
<tr>
<td>Persuading or influencing others</td>
<td>24.8%</td>
</tr>
<tr>
<td>Setting objectives for others and planning human, financial and other resources</td>
<td>23.1%</td>
</tr>
<tr>
<td>Instructing, teaching or training people</td>
<td>23.0%</td>
</tr>
<tr>
<td>Making speeches or presentations</td>
<td>16.5%</td>
</tr>
<tr>
<td>Sales skills</td>
<td>14.1%</td>
</tr>
</tbody>
</table>
3. Associate professionals

Associate professionals demonstrate the highest level of specialist knowledge and skill shortage of graduate-level applicants, but otherwise shortage intensity seems slightly lower than for managerial roles, and slightly higher than for professional-level applicants, particularly in soft skills. When recruiting into a hard-to-fill vacancy, product knowledge, problem solving and time management seem to be the biggest barriers to recruitment for this group.

### Technical / Practical Skills Found Difficult to Obtain from Applicants for Associate Professionals

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist skills or knowledge needed to perform the role</td>
<td>71.4%</td>
</tr>
<tr>
<td>Knowledge of products and services offered by your organisation and organisations like yours</td>
<td>46.8%</td>
</tr>
<tr>
<td>Solving complex problems requiring a solution specific to the situation</td>
<td>43.1%</td>
</tr>
<tr>
<td>Knowledge of how your organisation works</td>
<td>34.8%</td>
</tr>
<tr>
<td>Advanced or specialist IT skills</td>
<td>28.5%</td>
</tr>
<tr>
<td>More complex numerical or statistical skills and understanding</td>
<td>28.4%</td>
</tr>
<tr>
<td>Writing instructions, guidelines, manuals or reports</td>
<td>20.9%</td>
</tr>
<tr>
<td>Reading and understanding instructions, guidelines, manuals or reports</td>
<td>20.1%</td>
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<td>Computer literacy/basic IT skills</td>
<td>18.4%</td>
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<tr>
<td>Basic numerical skills and understanding</td>
<td>16.3%</td>
</tr>
<tr>
<td>Adapting to new equipment or materials</td>
<td>16.1%</td>
</tr>
<tr>
<td>Communicating in a foreign language</td>
<td>9.8%</td>
</tr>
<tr>
<td>Manual dexterity</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

### Soft Skills Found Difficult to Obtain from Applicants for Associate Professionals

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to manage own time and prioritise own tasks</td>
<td>44.5%</td>
</tr>
<tr>
<td>Customer handling skills</td>
<td>37.3%</td>
</tr>
<tr>
<td>Persuading or influencing others</td>
<td>35.8%</td>
</tr>
<tr>
<td>Sales skills</td>
<td>34.5%</td>
</tr>
<tr>
<td>Managing or motivating other staff</td>
<td>28.6%</td>
</tr>
<tr>
<td>Managing their own feelings, or handling the feelings of others</td>
<td>28.2%</td>
</tr>
<tr>
<td>Team working</td>
<td>28.0%</td>
</tr>
<tr>
<td>None of the above</td>
<td>24.2%</td>
</tr>
<tr>
<td>Setting objectives for others and planning human, financial and other resources</td>
<td>23.4%</td>
</tr>
<tr>
<td>Making speeches or presentations</td>
<td>23.3%</td>
</tr>
<tr>
<td>Instructing, teaching or training people</td>
<td>23.1%</td>
</tr>
</tbody>
</table>

The ESS has a detailed section of questions on employer training that can go some way to examining how employers are addressing these issues and analysis of that data is strongly recommended for future work in the area.
The expert membership organisation for higher education student career development and graduate employment professionals.