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The **Skills Research Digest** monitors recently published skills and labour market research relevant to the work of the Department for the Economy and to the strategic and policy issues that we face in Northern Ireland.

In each case, we provide a short summary of the key points and web links to the full article or report. A full list of sources can be found at the end of the publication.*

Highlights this quarter include:

- The focus on futures, including of skills, work and assessment, continues, with emphasis shifting to future-proofing and policy development in efforts to anticipate, pre-empt and plan for what lies ahead.
- Lifelong learning is highlighted as important in a range of items, with calls for greater encouragement, investment and funding, to a lifelong entitlement to learning and initiating a lifelong learning revolution.
- Most items were researched and/or written before, or in the early days of, the COVID-19 pandemic and its outbreak in the UK, with just two papers specifically on the topic; expect Q2 to look quite different.

** Links are correct at the time of publication, however it is likely that some will break over time. The list of sources has more general links, which should help the reader to track down the original report.*

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Analytical Services, Department for the Economy ✉ analyticalservices@economy-ni.gov.uk

The research summarised here presents the views of various researchers and organisations and does not represent the views or policy of the Northern Ireland Executive or those of the authors.

The Digest is prepared by:
Elaine Hendry
www.emhconnect.co.uk

Angela Gardner
www.ajenterprises.co.uk

16–19 EDUCATION

The Education Policy Institute (EPI) published [An international comparison of technical education funding systems: What can England learn from successful countries?](#)

- Across the UK, technical students receive 23% less funding than academic students.
 - The average OECD spend is 16% more per technical student and as high as 37% more in the Netherlands and Germany.
 - In 2016 the UK spent £6,990 per technical student on average vs an OECD average of £8,080.
- In England:
 - Real-terms funding per student in sixth forms and colleges has fallen by 16% since 2010 and bursary funding by 71% per student; employers receive less generous apprenticeship subsidies than leading European nations.
 - Technical courses tend to be shorter than comparable courses in leading developed countries and are less expensive to run; fewer students enrol on high-cost courses such as engineering, manufacturing and construction.
 - The upper secondary education offer of two years maximum compares with up to five in Austria and four in Denmark and Norway.
 - The 16–19 technical curriculum is very narrow; in other countries students continue to study languages, maths and other general subjects.
- For England to become a leader in technical education, the Government should:
 - review funding for technical pathways
 - increase the number of 16–19 apprenticeship starts, including by incentivising the recruitment of younger workers
 - review the adequacy of student support
 - reconsider curriculum breadth and the length of technical courses.

The Centre for Vocational Education Research (CVER) published [Peer Effects and Social Influence in Post-16 Educational Choice](#).

- It investigates the extent to which the average or subject-specific ability of peers impacts an individual's choice of an academic or vocational route.
 - It also examines whether peer impact differs by gender, ability range or individual subject choice.
- Peer group ability strongly affects post-16 educational choices; in particular, having higher ability peers significantly reduces the likelihood that an individual will undertake post-16 vocational or technical education.
 - A 1% increase in the ability of one's peers reduces the likelihood of enrolling in a vocational qualification by 0.21ppt for males and 0.14ppt for females.
- Individuals at the bottom of the ability distribution are more influenced by their peers than those at the top; the effect is smaller for females than for males.
- Among those who select the vocational route, there is little evidence that peers affect subject choice.
 - They have slightly more impact on those choosing the academic route – for both males and females, higher ability peers are associated with an increased likelihood of choosing business & economics, arts and geography.
 - There is also evidence of a positive impact on the likelihood of females choosing science.
- If those peers who are closest in socioeconomic characteristics are also more likely to make the same education choice, the estimated peer effect is likely to be greater.

Cedefop (the European Centre for the Development of Vocational Training) published [On the move but not there yet, a briefing note on European policies on international mobility of students in initial vocational education and training \(IVET\)](#).

- Largely as a result of a 2011 European Council recommendation, young people in IVET today have more opportunities to do part of their training abroad than their peers of a decade ago.

- The recommendation included measures to boost IVET learners' mobility ranging from providing information and guidance to recognising skills acquired abroad and the portability of grants and support to disadvantaged learners.
- There are still constraints on mobility, however:
 - VET systems differ vastly from one country to another, making it difficult to give and to get credit points.
 - There is a pay problem linked to apprentice mobility: why would an employer sending an apprentice abroad continue to pay their wages while the benefit of their work goes to the employer hosting the apprentice?
 - Challenges remain for VET learners younger than 18.
- Cedefop is looking closely at cross-country mobility in apprenticeships, while a proposed increase in the Erasmus+ budget should enable many more VET learners to benefit.
- Progress over the past two years has been most visible in three areas: removal of institutional barriers; recognition of skills/knowledge acquired abroad; support of disadvantaged learners.
- Areas where less progress has been made:
 - Few countries have taken action to involve disadvantaged learners in mobility activities.
 - Policy governance has been poor, with many countries lacking targets and evaluation.

The UNESCO International Research & Training Centre for Rural Education and Smart Learning, Institute of Beijing Normal University, published [Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak](#) in March 2020.

- The Handbook describes several flexible online learning strategies implemented in China under the Chinese Ministry of Education initiative 'Disrupted classes, Undisrupted Learning', which ensured flexible online learning to over 270m students from their homes.
 - It aims to help other educators, researchers and practitioners implement similar approaches in their own contexts.
 - Strategies are presented based on six dimensions: infrastructure; learning tools; learning resources; teaching and learning methods; services for teachers and students; cooperation between government, enterprises and schools.
 - It includes a summary of the available digital learning resources for different levels of education.

SCIENCE, TECHNOLOGY, ENGINEERING & MATHS (STEM)

Engineering UK published [Engineering Brand Monitor 2019](#), its annual survey on attitudes to engineering among 11–19 year-olds, secondary STEM teachers and members of the general public.

- Only 24% of 11–19 year-olds said they knew a lot/quite a lot about what people working in engineering do.
- 50% of 11–19 year-olds held positive views of engineering, compared with 68% for technology, 63% for science and 56% for maths.
- 41% of 11–19 year-olds thought a career in engineering was desirable, compared with 49% for science and 46% for technology.
- Knowledge of pay was found to be a key influencing factor in young people's decision-making; 56% of 16–19 year-olds underestimated the starting graduate salary of an engineer.
- 50% would consider a career in engineering – 53% of 11–16 year-olds and 45% of 16–19 year-olds.
- Those with good knowledge of what engineers do were 4.4 times as likely to view engineering positively (82%) and twice as likely to consider a career in it (40%).
- 90% of STEM teachers held positive views of engineering and 80% believed it would be a desirable career for their students, but only 30% said they knew quite a lot/a lot about what engineers do; the figures for parents were 69%, 68% (desirable for their children) and 27%.
- 96% of teachers and 83% of parents would recommend a career in engineering, but only 45% of teachers and 32% of parents felt confident giving careers advice on the subject.

The Wellcome Trust published [Science Education Tracker 2019](#), results of its second survey of the attitudes, experiences and aspirations in science and related disciplines of 6,400 11–18 year-olds in England.

- Only 41% of students in Years 7–13 consider an understanding of science to be important to their everyday lives, 40% for Y10–13 (down from 48% in 2016 when the first survey took place).
- 32% of students in Y10–13 say that practical work is the most motivating aspect of science lessons; 63% in Y7 are doing practical work at least once a fortnight, falling to 33% in Y11.
- 27% in Y10–13 wanted to do STEM-related work experience but were unable to do so.
- Females in Y10–13 are less likely than males to rate themselves as good at: maths (51% females, 63% males), physics (28%/46%) and chemistry (34%/42%).
- 29% of students from the least deprived areas have many family science connections (e.g. know people in science-related jobs or have parents interested in science) compared to 16% of students from the most deprived areas.
 - 68% of secondary students with many family science connections are interested in a STEM career compared with 42% of those with no family science connections.

The webpage also includes results of a sub-survey looking at awareness of and trust in various machine learning applications; a separate document sets out 'calls to action' for government, schools, the science education community, higher education (HE) providers, employers, families, communities and the media.

University College London (UCL) Institute of Education (IOE) published [ASPIRES 2: Young people's science and career aspirations, age 10–19](#), the latest report from a [longitudinal research project](#) of young people in England.

- Patterns of aspiration are relatively consistent from age 10 to 18; there is no evidence of a poverty of aspiration.
 - Around 16% of young people specifically aspire to be a scientist; although this is established early and remains stable, the demographic profile becomes less diverse over time.
- Low science aspiration is not due to lack of interest or family support or to negative views about scientists.
- Inequalities in science identities and aspirations are evident in primary school and exacerbated through secondary school.
 - High-achieving, middle-class boys and those with high levels of family science capital are much more likely to aspire to a science career, and to feel and be recognised by others as being 'sciencey'.
- The complex, multiple factors influencing young people's science identities and aspirations can be grouped into three themes: inequality in science capital; dominant association with 'cleverness' and 'masculinity'; educational factors and practices, including gatekeeping and teacher assumptions.
- In terms of wider views of STEM:
 - Students who aspire to engineering are more likely to be motivated to earn a lot of money, make a difference in the world and create things.
 - Young women who aspire to engineering are exceptionally confident in their science academic abilities and relatively less likely to be motivated by a desire to help others through their careers.
- Recommendations include:
 - Focus on changing STEM education, not young people, recognising and challenging the processes that maintain and perpetuate the elitism of STEM.
 - Place equity and social justice at the heart of STEM education.
 - Focus on building science capital rather than just inspiring and informing, and transform educational gatekeeping practices that restrict access or resources to certain groups.

A separate [research paper](#) concludes that, while science aspirations are influenced by a broader range of factors, gender is the main factor in influencing engineering aspirations. It might be more effective to focus efforts on challenging the elitist culture and practices that may influence student perceptions.

CVER published [Gender and Socio-Economic Differences in STEM Uptake and Attainment](#), exploring the extent of gender imbalances in STEM in both academic and vocational post-16 education routes in England.

- Gender gaps in STEM vocational education are more prominent than in A-level STEM study; on average, gaps are also more persistent.
- Gender differences in ability fail to fully explain the gender gaps that exist in A-level STEM study, but prior attainment plays an even more limited role in explaining gaps in vocational education.
 - The exception to this is in the study of maths and science subjects in vocational education, where the small gap that remains after conditioning on individual and school characteristics can be explained by prior attainment.
- There is evidence that the gender composition of the individual's secondary school impacts the decision to study vocational STEM qualifications but does not explain large gender differences.
 - A positive relationship is identified between the proportion of females and vocational STEM uptake.
- Gender imbalances in STEM study are apparent across every socioeconomic status group; socioeconomic status is not associated with the probability of taking STEM qualifications.
- Females are more likely to achieve their attempted qualification than males in the majority of STEM subjects; there is therefore no support for the theory that the underachievement of females who select into vocational STEM drive the gender participation gaps.
- While academic qualifications provide more general skills, the nature of vocational qualifications in preparing individuals with occupation-specific skills may make subject choice more sensitive to the idea of 'traditional' occupations done by men and women.
- While initiatives to improve girls' confidence and interest in STEM subjects are beneficial, focusing on the continuation of STEM academic study may overlook opportunities for STEM learning via more practical, vocational routes and disregard students who are more suited to vocational study.

The Economic & Social Research Institute (ESRI) published [*The effect of high school rank in English and math on college major choice*](#), based on data on preference rankings for all high school students who apply for college in the Republic of Ireland (RoI).

- The aim was to investigate whether rank in English and maths – conditional on absolute achievement and within a school cohort – affects the main subject a student chooses for college.
- Findings include:
 - A higher rank in maths increases the likelihood of choosing STEM and decreases the likelihood of choosing arts and social sciences subjects.
 - A higher rank in English increases the probability of choosing arts and social sciences and decreases the probability of choosing STEM.
 - The rank effects are substantial, about 33% as large as the effects of absolute performance in maths and English.
 - Subject choice in school is an important mediator, e.g. students who rank high in maths are more likely to choose STEM subjects in school and subsequently to choose STEM for college.
 - The tendency for girls to be higher ranked in English and lower in maths in school cohorts can also explain about 6% of the STEM gender gap in mixed-sex schools and about 16% of the difference between mixed-sex and same-sex schools.

The OECD published [*Do gender gaps in reading and mathematics evolve between childhood and adulthood?*](#), investigating one potential cause of women's under-representation in STEM.

- The choice of field of study in tertiary education is often more important than the degree earned; women continue to be under-represented in STEM fields and therefore in well-paid STEM occupations.
 - Standardised, large-scale assessments can begin to answer questions about whether differences in occupational choices reflect different preferences or a lack of skills required to succeed.
- Girls' advantage in reading performance peaks in adolescence but disappears by early adulthood.
 - By contrast, boys' advantage in maths performance increases steadily from age nine to 27.
- Boys are more likely to pursue academic programmes and jobs that make greater use of maths skills.
 - It is possible that this is because studies and/or occupations that make more intensive use of numeracy skills are the only domains where men have a slight advantage over women.
 - This could explain the widening of the gender gap in maths over time, which may also be a result of differences across the various assessments from which the data are drawn.

- Over time, men are able to catch up with women in reading proficiency because reading is a transversal skill that can also be mastered outside of formal education.

The International Labour Organization (ILO) published new, experimental [data](#) on the percentage of women employed in STEM occupations in 69 countries, showing wide variation.

- In Georgia, the figure is 56%; US 48%; UK 40% – close to the median of 38%; Austria 35%.
- STEM occupations make up less than 20% of employment in all 69 countries.

The data are experimental as there is no internationally agreed definition for STEM occupations.

EMPLOYABILITY & CAREERS

CVER published [Post-Compulsory Education Pathways and Labour Market Outcomes](#), using data from the Longitudinal Study of Young People in England.

- The research uses groups of individuals with similar education-to-employment transitions to examine the characteristics that could be used to target those more at risk of poorer education and early labour market outcomes.
- Young people follow a range of diverse pathways after the end of compulsory education; they may also change trajectory after one, two or even three years, showing that their pathways are not strongly pre-determined at age 16.
 - This makes it difficult to develop a typology of pathways that can then be predicted from characteristics observable before the individuals embark on them.
- It is therefore hard to provide strong policy conclusions on how prior characteristics may be used to identify individuals more likely to make choices that lead to less favourable labour market outcomes.
 - This can also be considered encouraging, as individuals can still make choices during the first few years out of school that will influence their overall career trajectories in their early 20s.
 - Individuals may be partly behaving according to preferences uncorrelated with the background and school performance variables used in the prediction model.

In other words, young people are unpredictable and the choices they make have unpredictable outcomes.

CVER published [The long-term impact of improving non-cognitive skills of adolescents: Evidence from an English remediation programme](#), estimating the long-term labour market effects of England's Entry to Employment (E2E) programme.

- Running between 2003 and 2010, E2E was tailored to individual needs but primarily focused on non-cognitive skills with the aim of improving young people's transitions to the labour market or training.
 - Unlike the majority of education programmes, E2E did not lead to recognised qualifications.
- Participating in E2E courses increased the earnings of participants by an estimated £7,000 10–12 years after taking part.
 - The increase in earnings was primarily driven by an increase in the probability of being employed; there was no evidence of increased pay or number of days worked per year.
 - The programme even increased the earnings of those who didn't complete a vocational course after E2E, suggesting that the focus on non-cognitive skills had a direct effect on job outcomes.

The benefits took several years to materialise; an early evaluation of the programme could have led to the erroneous conclusion that it had no or little effect on labour market outcomes.

Education & Employers published [Disconnected: Career aspirations and jobs in the UK](#), based on a survey of 7,000 14–18 year-olds in the UK.

- There is a three-fold disconnect or worse between aspirations and demand in almost 50% of the UK economy.
 - For example, five times as many young people want to work in art, culture, entertainment and sport as there are jobs available; over 50% of these don't report an interest in any other sector.
 - Young people are confident in their choices, and the disconnect is strikingly similar at age 17/18 to age 14/15, with similar patterns to the jobs to which children aspire at age 7/8.
- Many young people report only limited careers support from their schools and colleges, but those who are benefitting from careers activities and multiple career influences in secondary education have aspirations that are, in aggregate, better connected to the labour market.

- Employers must also play an engaged role in solving this disconnect, both by bringing their insights into schools and by ensuring the opportunities they offer future workers are attractive and inspiring.
- There is evidence of a positive relationship between young people's engagement with the world of work and their GCSE attainment – they are likely to earn more and are less likely to be NEET (not in education, employment or training).
 - Careers-related learning in primary schools plays a key role in getting children excited about learning as well as tackling ingrained stereotypes and narrow aspirations.

The OECD in partnership with Education & Employers published [*Dream jobs? – Teenagers' career aspirations and the future of work*](#), a new analysis of PISA data.

- 47% of boys and 53% of girls surveyed in 41 countries expect to work in one of just ten popular jobs by age 30 – an increase of 8ppt for boys and 4ppt for girls since the 2000 PISA survey.
 - The narrowing of job choices is driven by young people from more disadvantaged backgrounds and by those who were weaker performers in the PISA tests in reading, maths and science.
- Traditional occupations – e.g. doctor, teacher, vet, engineer, police officer – continue to capture the imaginations of young people as they did nearly 20 years ago, before social media and the acceleration of technologies such as artificial intelligence (AI) in the workplace.
 - A broader range of career aspirations, better reflecting labour market demand, exists in countries with strong, established vocational training for young people, such as Germany and Switzerland.
- There is also a frequent misalignment of young people's career aspirations with the education and qualifications required to achieve them.

The OECD published [*PISA in Focus: Are students' career expectations aligned with their skills?*](#)

- PISA 2018 asked 15 year-old students which education level they expected to complete and what occupation they expected to be working in when they were 30.
 - In most countries and economies, less than 25% of students who answered the question were vague or undecided.
 - However, even when they appeared to have a precise idea of what they wanted to do in the future, they didn't necessarily have a clear notion of what they needed to do to achieve their goal.
- On average, 76% of those who cited an expected occupation saw themselves as managers or professionals; of these, 20% didn't expect to attain the tertiary level of education required for such occupations, rising to 34% among disadvantaged students.
 - In the UK, 82% aspired to be a manager or professional, but almost 40% of disadvantaged students didn't expect to get a degree (10% of advantaged students).
- Disadvantaged students often struggle at school; however, many also have lower ambitions than would be expected given their academic achievement.
 - Disadvantaged students have less knowledge about the choices of tertiary programmes available and are not always aware of the financial aid available to help meet the cost of tertiary education.
 - On average across the OECD, only 59% of disadvantaged students said they knew how to get information about student financing; 36% had acquired these skills outside school, 23% in school.

The University of Warwick Institute for Employment Research published [*The role of parents and carers in providing careers guidance and how they can be better supported: Evidence report*](#).

- The study aimed to understand how parents and carers can be better supported by schools and colleges to help and advise their children about career choices.
 - It includes examples of interventions for engaging parents from England, Wales and Scotland, and an examination of international policies and strategies from e.g. Denmark, Germany and the RoI.
- There is much evidence that parental engagement in careers is important to facilitate and/or expand opportunities for young people.
 - The influence of parents is exerted through behaviours and family conditions that foster the development of values, attitudes and self-concepts.
 - Parental involvement includes that taking place at home and in educational institutions, and institution-based activities including communication with teachers and careers practitioners.

- Parental engagement is important for supporting: the development of information seeking and research behaviours; career decision-making and confidence; planning, goal setting and creating a sense of direction; career adaptability, flexibility and employability skills.
- Parental engagement works well when parents can work in partnership with institutions to support learning and careers-related activities, with clear communication supported by targeted resources.
- Recommendations are made for schools, colleges and careers organisations, and the following for policymakers:
 - Extend policy to recognise the importance of the role of parents in careers education and guidance.
 - Parental involvement should be clearly specified in any benchmarking or quality assurance.
 - Workforce development to mandatory professional standards, through training and continuing professional development (CPD), should be a prerequisite.

The European Commission and OECD published [Policy brief on recent developments in youth entrepreneurship](#), exploring the scale and nature of entrepreneurship activities undertaken.

- An overview is provided of the main policy actions that can be used to support youth entrepreneurship, including: awareness-raising activities (e.g. role models and business competitions); entrepreneurship education and training; coaching and mentoring; improving access to finance; and entrepreneurship network development.
- Key messages include:
 - Youth unemployment in the EU has fallen from its recent peak, therefore youth entrepreneurship policy is increasingly emphasising the quality rather than the quantity of businesses created.
 - Almost 50% of young people say they would prefer entrepreneurship to working as an employee, however they are much less likely than adults to be self-employed.
 - Youth entrepreneurs are often disadvantaged by their lack of work experience and credit history.
 - Public policy can address many of the market and institutional barriers to youth entrepreneurship by: increasing awareness about its potential; embedding entrepreneurship teaching at all levels of education; offering training and coaching outside education; improving access to finance; supporting the development of entrepreneurship networks for young people.
 - Policymakers should avoid trying to select 'winners' for support; instead they should offer support in stages, with entrepreneurs who are leading successful projects becoming eligible for follow up.
 - Policy support is more effective where finance is combined with advice, training and networking.
 - Policymakers should not expect everyone who participates in an entrepreneurship initiative to go on to create a business; however, they may still obtain benefits for their future careers.
- Four key considerations for designing policies and programmes are: participant selection; packaging of support offers; displacement effects; digital delivery of entrepreneurship support.

The ILO published [Global Employment Trends for Youth 2020: Technology and the future of jobs](#).

- 15–24 year-olds are three times as likely as over-25s to be unemployed, partly due to lack of work experience, but also due to major structural barriers preventing them from entering the jobs market.
 - Even those who are working continue to face high rates of poverty and are increasingly exposed to non-standard, informal and less secure forms of employment.
- Paradoxically, despite being enthusiastic early adopters of new technologies, young people are more likely to be in occupations with a greater proportion of automatable tasks.
- Young people with vocational training are more likely to be working in an automatable job than those with a university degree, and may find themselves having to switch from one precarious job to another and may ultimately end up NEET.
 - Occupation-specific skills imparted by vocational training tend to become obsolete faster than more general problem-solving skills taught at HE institutions (HEIs); such programmes need to be modernised.
- Policies are required that: generate a sufficient number of decent jobs; equip young people with the skills required for those jobs; ensure they enjoy social protection and have rights at work; and encourage them to join organisations that will represent them in tripartite dialogue.

- Public employment services are increasingly being delivered through digital channels, particularly to young people; however, it is essential to ensure that the digitally illiterate are not excluded.
 - Digitalisation includes the use of 'deep learning' techniques and 'big data' to make job matching more efficient, which makes it possible to tailor services to the individual needs of jobseekers.
 - The valuable data collected by public employment services on gaps between jobs and skills among young people can feed into education and training programmes.
 - Public employment services are a key partner in helping young people to prepare for the volatile world of digital work, and their adoption of digital technologies has, on the whole, increased the efficiency, transparency and inclusiveness of labour market intermediation.

The ILO also published [new indicators](#) that provide insights on youth transitions into the workforce.

Cedefop published [Inventory of lifelong guidance systems and practices](#), a set of short country reports describing policy developments and structures relating to career guidance, career education and career development.

- Reports are available for [Northern Ireland](#), [England](#), [Scotland](#) and [Wales](#).

The Institutional Landscape

THE FURTHER EDUCATION & SKILLS SECTOR

England's Department for Education published [Costs and cost drivers in the further education \[FE\] sector](#), looking at the costs and income related to providing good quality FE in England.

- Among the findings for general FE colleges (GFECs):
 - Financial challenges are not due to poor planning, budgeting and/or monitoring of provision.
 - The largest single cost is teaching staff; keeping this under control is the main factor in ensuring that a whole GFEC or a department operates within its income.
 - Median staff costs as a percentage of income is highest for [statutory] English and Maths GCSE retakes, at over 80%.
 - Otherwise, other class-based provision is lowest (40%); construction, engineering and motor vehicle are around the mid-point for workshop subjects (52–56%); and hospitality & catering and agriculture are top (66%).
 - Classroom-based provision is more likely to be subsidising workshop-based provision, particularly health & social care and travel & tourism.
- The sixth form colleges (SFCs) studied were, at best, breaking even.
- For independent learning providers:
 - It is very difficult to offer apprenticeships funded at the lower end of the range (£3,000 or less over 12 months) to an acceptable standard while making an acceptable return, even in an employer-based model.
 - When provision is centre-based, even more highly funded apprenticeships reduce to zero profitability.
- Providers have had to go to increasing lengths to ensure income covers costs, including reducing course content, cutting courses, increasing group sizes and increasing non-tutor-led learning.
 - For all GFEC/SFC staff, workload is increasing, headcounts are down, less development is taking place and pay rises are infrequent; all of which is making recruitment and retention more difficult.
 - There is widespread belief in GFECs/SFCs that pressure on budgets has led to inadequate levels of learner support; little capital expenditure is taking place and the fabric of the college estate is in gradual decline.

[The Cumberford-Little Report – One Tertiary System: Agile, Collaborative, Inclusive](#) was published, co-authored by the Principals of Edinburgh and City of Glasgow Colleges, commissioned by the Scottish Government to consider the economic impact of FE colleges.

- Scotland's 26 colleges have a significant economic impact (£3.5b annual GDP boost) and support a range of national priorities; however they are not maximising their potential to support business growth and to engage with business, particularly SMEs, to develop their skills and growth capacity.

- The report identifies outdated policy and operating measures and other constraints and sets out the purpose of a 21st century college; 11 case studies illustrate successful current examples.
- Recommendations include making supporting business growth a top priority for colleges and reforming the funding model.

The Social Mobility Commission published [Improving attainment among disadvantaged students in the FE and adult learning sector](#), an evidence review by the Learning & Work Institute (L&W).

- While some research shows that programmes can significantly improve attainment (e.g. obtaining a Level 2 (L2) qualification), other studies found the improvement to be modest.
- Programmes have been used to support achievement in basic skills and for progression to FE and HE.
 - However, despite encouraging short-term effects, improvements may not be sustained or lead to higher levels of attainment.
- The evidence on what types of intervention work is mixed; however, the most effective programmes appear to be those that offer comprehensive support and those that integrate with course curricula (e.g. embedding basic skills provision in a vocational pathway).
- A few studies consider what works for specific groups, e.g. care leavers, lone parents or adults with language needs; most programmes are designed to support disadvantaged students in general.
- Most studies evaluate the impact of a programme over a relatively short timeframe, whereas attainment may be a longer term outcome.
- Research in the FE sector tends to be small-scale and qualitative, rather than focused on impact and policy effectiveness; there is a lack of UK-based causal evidence, with most coming from the US.

Among the recommendations: Government should invest £20m over five years to establish a What Works Centre for FE, focusing on all stages of the learner journey and on specific groups facing specific barriers.

UCL IOE, the Edge Foundation and Commercial Education Trust published [Evaluation of Career Colleges \[CCs\]](#).

- CCs were launched in 2013 to equip 14–19 year-olds with the skills needed by business in a range of industries, such as healthcare, digital and construction.
 - There are more than 20 CCs operating within FE colleges in England and Wales, funded through normal 14–19 routes, and Scotland’s first CC is due to launch this year.
 - They offer practical, specialist training and education designed by and delivered with industry, in subjects with real work prospects.
- Key findings include:
 - Several CCs were not following the ‘standard’ model, with four models identified: 14–16-year-olds blended educational approach; direct entry for full-time 14 year-olds and recruitment at 16+; additional/top up 16–18 provision; and discrete 16–18 cohorts.
 - All CCs had an employer board that included large companies and SMEs.
 - In many instances the CC was an aspirational choice; this is important, especially for recruitment at age 14+ where this unusual transition point is often associated with disengaged students.
 - Where employer engagement was working well, employers were co-creating project-based learning and were involved in assessment and feedback, there was clear progression, and work placements/experience were of high quality, resulting in a highly authentic student experience.
 - There were many opportunities for students to develop their confidence and understanding of work; they were positive about work placements, project-based learning and meeting with employers and how this helped them to further their aspirations.
 - The focus on project-based learning enabled students to develop a range of skills and capabilities relating to enterprise, e.g. team working, collaboration, planning, coordination and resilience.
 - Challenges included: cost of the programme; the extent to which the brand was recognised in the community; and how to engage in wider school partnerships in a highly competitive system.

WorldSkills UK published [Championing difference for a better workforce: Increasing diversity and inclusion in the WorldSkills UK Competitions](#), the report of an independent review by the Social Innovation Partnership.

- In 2018, 90% of WorldSkills UK competitors were white, 67% were male and only 5% identified as having a disability or learning difficulty.
- Barriers to entry in WorldSkills competitions include:
 - The registration process means that tutors, trainers and employers control who is registered for the skills competitions, making it open to bias as well as good practice.
 - Limited awareness of WorldSkills UK opportunities means students are unable to advocate for themselves to their tutors and employers.
 - Competitors lack diverse role models within competition professionals as well as within the wider technical skills sector.
 - Competitors can face social and financial barriers to participation and during the competitions, such as anxiety, lack of confidence, lack of support from family, college or employer, or inability to afford the extra time to train.
 - The language around the competitions relating to 'excellence' and 'winning' can be a barrier to some, particularly women, compared with the language used around developing skills.
- Recommendations include:
 - Form new strategic partnerships with groups that can help achieve diversity and inclusion goals, such as government, business, training providers, student groups and national organisations working with young people in schools and colleges.
 - Create an advisory 'working group' of employers, and another of FE colleges and training providers, to develop the business case, apprenticeship pipeline and diversity and inclusion benchmarks from an industry and an education perspective.
 - Create tools and guidelines showcasing what works, including: encouraging schools and employers to create peer mentoring opportunities for past competitors; encouraging and facilitating social activities among competitors; demonstrating how companies can promote their competitors; highlighting how employers can market their brand and scout talent at the competitions.

HIGHER EDUCATION: APPLICANTS & STUDENTS

Universities UK (UUK) published [Perceptions of Fairness: Research for the Fair Admissions Review](#), findings from a survey of 1,500 British adults who applied to HE in the UK between 2015 and 2019.

- 64% agreed that the application process worked well in its current state; among those who disagreed:
 - 34% said the careers advice they were given wasn't very helpful
 - 29% thought the application process was too long
 - 27% felt they hadn't had all the information they needed to make an informed choice
 - 24% felt that not everybody in their school/college was given equal guidance
 - 22% said they felt pressured by their school/college to apply to university.
- 79% felt they were very/fairly well supported by universities and colleges during the applications process.
- 64% thought it was fine to apply with predicted grades, while 29% described this as a challenge.
 - 56% felt institutions should only make offers post results; this rose to 60% among black, Asian & minority ethnic (BAME) applicants and to 63% among those who were first in their family to apply.

The findings are informing UUK's Fair Admissions Review established in July 2019, involving UCAS and school, college, university and student representatives; it is expected to publish findings in spring 2020.

UCAS published [2019 International Insights: Understanding international applicants to UK higher education – with a focus on key markets](#).

- The number of non-UK applicants and acceptances has increased almost every year since 2012, partly due to the removal of number controls at English HEIs; exchange rates also make the UK an attractive destination.
 - The number of 18 year-old non-UK applicants has increased by 8.7% and those over 35 by 8.6%, while there have been falls in the numbers applying from age groups between 21 and 34.

- In 2019, applicants increased by 5.2% and acceptances by 3.8%; the growth has been driven by countries outside the EU (+8.0%/6.9% respectively).
- 15.3% of non-UK applicants – and 3.0% of all applicants – are from China (+25.7% in 2019), followed by India at 4.8% of applicants (+9.2%).
 - Other sources of significant numbers didn't follow the same trend: US applicants grew by 3.3%, Hong Kong was down by 5.6%; Malaysia remained stable.
 - Some emerging markets saw substantial increases: Ghana +25.5%, South Africa +17.1% and Nigeria +10.8% (following a previous fall).
 - Applicant numbers from the Middle East are growing, with Kuwait emerging as a key source; Thailand (+7.6%) and Taiwan (+11.6%) are also notable sources.
- The top alternative countries applied for are: the Netherlands, US, Canada and Hong Kong.
- Non-UK applicants are nearly twice as likely to apply to at least one London provider than UK applicants (54.1%/27.8%), and 72.8% applied to at least one higher tariff provider compared with 49.2% of UK applicants.

None of the figures is broken down by nation.

The Higher Education Policy Institute (HEPI) published [A Languages Crisis?](#), written by a current undergraduate classics student.

- 32% of UK 16–30 year-olds are confident in reading and writing in another language, compared with 89% in the rest of the EU.
 - Between 2010/11 and 2016/17, student numbers in French fell 45%, German 43% and Italian 63%.
 - Languages provision is vulnerable to departmental closures and downsizing.
- The problems start in schools, where language GCSEs are no longer compulsory and are often viewed negatively.
 - This is compounded by the lack of alternative qualifications and demographic inequalities.
- Key recommendations:
 - Learning an ancient or modern foreign language should be compulsory up to Key Stage 4, with accreditation encouraged but optional.
 - GCSE and A-Level courses should be more varied and appealing, featuring coursework as well as exams.
 - Policymakers should introduce measures to increase teaching staff numbers.
 - There should be additional government funding to safeguard provision of minority languages, and to facilitate free additional language learning for any students and staff members.

Brexit has created a pivotal moment to re-evaluate policy and attitude, while posing practical challenges.

MillionPlus, 'the Association for Modern Universities in the UK', published [Levelling up: Investing in higher technical education at universities in England](#), with reference to good practice in Scotland.

- A strategic objective shared by the Government and HEIs involved in higher technical provision is to grow overall numbers of those studying at L4/5 for degrees or standalone qualifications.
 - Recent policy decisions in England, such as the lack of financial support for part-time students and the introduction of higher tuition fees, plus the 2008 financial crisis, have reduced uptake.
 - The lack of loan or grant support for L4/5 is in stark contrast to the situation for students opting to take full undergraduate degree courses.
- For thousands of UK students, whether on sub-degree or postgraduate programmes, a university education is higher technical education, combining academic learning and technical training.
- The Government should:
 - introduce full maintenance grant support for all L4/5 learners at registered providers
 - support college/university collaboration, as they are both key players in higher technical provision
 - improve and increase the data available on L4/5 qualifications to enable a better understanding of the nature and scope of technical education at both colleges and universities

- ensure that all L3 qualifications are designed to enable progression, whether immediately or at a later point
- provide adequate financial support to students undertaking L3 qualifications.

The OECD published [How have women's participation and fields of study choice in higher education evolved over time?](#)

- The last few decades have seen faster growth in HE participation among women than men, which has reversed gender inequalities in tertiary attainment in almost all OECD and partner countries.
 - On average across OECD countries, 51% of 25–34 year-old women held a tertiary degree in 2017, compared to 38% of 25–34 year-old men.
- However, strong barriers are still preventing women from choosing science-related fields and careers, despite having the ability to do so.
 - Women predominantly choose education, and health and welfare, while men still predominate in STEM.
- Women's earnings still lag behind men's and their progression is constrained by many societal and economic factors.
 - Even when they hold the same degree, women earn less on average than their male peers for all fields of study and in all OECD and partner countries.

The OECD published [What are the choices facing first-time entrants to tertiary education?](#) exploring the many factors that influence young people's decisions.

- The field of study chosen by entrants to tertiary education will affect their chances of employment and their future earnings, although not to the extent that some may imagine.
 - Across OECD countries, the average employment rate for tertiary graduates ranges from 90% for those who studied ICT to 83% for arts & humanities, social sciences, journalism and information.
- The level of tuition fees students pay and the level of financial support they receive will depend on where they study.
 - The average (or most common) annual tuition fees range from zero (in public institutions in several OECD countries) to US\$29,478 (in independent private institutions in the US).
 - On average, the financial returns to graduates from tertiary education far outweigh the private costs to them.
- The criteria used to assess applicants' suitability for a programme of study vary to a surprising degree, despite ever-rising international student mobility.
 - In most OECD countries they will have to pass exams in order to enrol but, beyond this, there is little consistency in selection approaches.
 - Interviews, application letters and grade point averages from secondary school are all used to some extent in different countries.
 - It is not clear whether applicants with experience of one system will be able to navigate another.

HEPI published [What affects student wellbeing?](#), drawing on results from its most recent Student Academic Experience Survey of over 14,000 full-time UK students.

- There is more dissatisfaction with life (scoring under 7) among:
 - Bangladeshi students (42%) than white students (28%)
 - Students from the lowest participation quintile (35%) than from the highest (30%)
 - Students who live at home and who commute over five miles (37%) than those who have relocated (30%)
 - Students who feel few or no staff are helpful and supportive (49%) than students who feel all or most staff are helpful and supportive (24%).
- Students who say they experience few or no helpful teachers are 146% more likely to report a high level of life dissatisfaction than students who report all or most teachers are helpful, and 65% more likely to report a high level of anxiety.

Student Minds published [The University Mental Health Charter](#), 'a set of principles to support universities across the UK in making mental health a university-wide priority'.

- It will form the basis of a new Charter Award Scheme which is being developed to recognise and reward good practice.
- It covers a range of themes including: transition into university; learning, teaching and assessment; support services; staff wellbeing; staff development; research, innovation and dissemination.

Advance HE published [Religion and Belief in UK Higher Education](#), the first report of its kind, based on 2017/18 data from the Higher Education Statistics Agency (HESA). [Login is required to access the full report.]

- 50.2% of students reported having a religion or belief, 65.5% of whom are Christian, 17.8% Muslim.
- There were substantial differences in degree attainment by students' religion or belief.
 - 64.9% of Muslim students achieved a first class or 2:1 degree compared to 76.3% of all students.
 - At institutions with over 12% of students identifying as Muslim, the attainment gap was 8ppt, compared to 19ppt at those with fewer than 3.5% of Muslim students.
- 57.0% of all students were female, however 66% of students identifying as 'spiritual' were female, and 50% of Hindu and 50% of Muslim students.
 - More female than male students achieved a first or 2:1, regardless of religion.

The Student Room's Enlitened division published [How connected, engaged and supported are undergraduate students in the UK?](#) – findings from research among 879 undergraduates at 128 universities. [Registration is required to access the report.]

- 54% of students felt connected to their university, with second year students feeling less connected (43%) than first years (59%) and third years (51%).
- 63% had kept mental wellbeing concerns to themselves and not sought help from their university in the last year.
- 44% weren't sure or didn't know how their university could support them with mental wellbeing; they were more likely to trust their university to support them when they knew how it could.
- 74% felt that something had stopped them getting support; key barriers included shyness, lack of confidence and lack of energy.
- Friends and family were the most trusted source of support (67%).
- Only 3% went to their student union for information and support; 12% trusted the student union as a support channel.

England's Office for Students published [The National Student Survey \[NSS\]: Consistency, controversy and change](#) – analysis highlighting variations in how different student groups responded to the 2019 NSS.

- Part-time students had strikingly low agreement rates with questions concerning learning community and student voice.
 - Only 47.6% of part-time students agreed that their feedback had been acted on by staff – 13.8ppt behind their full-time peers and 7.5ppt below the expected benchmark*.
 - 56.6% of part-time students said they felt part of a community of students, compared to 69.4% of full-time students and the part-time benchmark of 63.7%.
- 66.2% of disabled students agreed that their course was 'well organised and running smoothly' – over 4ppt below their non-disabled peers and 3ppt below the benchmark.
- 75.3% of white students agreed that 'marking and assessment has been fair', compared to 67.0% of Asian students and 67.8% of black students.
- There are also variations between individual universities and colleges: while most have an overall satisfaction rate of over 81%, more than 100 score 80% and under.

**For 2018 and 2019 data the Office for Students (OfS) created benchmarks to give a more accurate picture of where there are statistically significant differences.*

PNAS (Proceedings of the National Academy of Sciences of the USA) published [Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering, and math](#).

- 'Active learning' enables students to more fully participate in thinking, discussing, investigating and creating, compared to passive techniques such as traditional lectures.
 - Students may be asked to practise skills, solve problems, struggle with complex questions, propose solutions and explain ideas in their own words through writing and discussion.
- The achievement gap between over-represented and under-represented students narrowed by 33% on exam scores and by 45% on course pass rates after instructors switched to active learning from passive techniques.
 - In courses where students spent at least 66% of total class time engaged in active learning, the gaps shrank by 42% and 76% respectively.
- Active learning techniques may create a more welcoming and inclusive environment, while also aiding comprehension by taking students through complex concepts step by step.

HEPI published [Unheard: The voices of part-time adult learners](#), looking at the decline of part-time HE in England from learners' own perspectives.

- Between 2011/12 and 2017/18, 60% fewer people started a part-time undergraduate course in England every year.
 - In 2017/18, 18% of undergraduate first-year students in England were studying part-time, rising to 56% for those aged 24+.
 - 65% of part-time undergraduate first-year students were women.
 - 46% of those who started part-time undergraduate courses were aged 29 or under.
- There are three areas in which a revised approach might arrest, or even reverse, the drop in part-time numbers:

Becoming part-time student aware

- Universities should personalise support, including using relatable peers in mentoring roles.
- Policymakers should: ensure admissions systems are fit for purpose for part-time learners and that information, advice and guidance is clear and accessible; introduce a lifelong learning loan allowance and a maintenance grant.

Institutional flexibility

- Universities should encourage flexible, accessible and affordable HE tasters designed to demonstrate that HE is not out of reach.
- Policymakers should: expect HEIs to report on their pastoral support systems for part-time learners as part of their access & participation plans; introduce a 'step-on, step-off' system offering portability; increase the availability and status of milestone L4/5 qualifications; impose the same fee caps on accelerated part-time study as on full-time.

Sector drivers

- Universities should design teaching approaches that will boost returner confidence, including regular feedback on authentic assessment tasks.
- Policymakers should: refresh their language to avoid defaulting to current assumptions about HE learners; introduce proposals to increase post-18 education opportunities for all.

HIGHER EDUCATION: WIDENING PARTICIPATION

EPI published [The impact of interventions for widening access to higher education: A review of the evidence](#), commissioned by the newly established Centre for Transforming Access & Student Outcomes in Higher Education (TASO).

- Much of the existing evidence focuses on intermediate outcomes such as increased aspirations and awareness; there is a lack of evidence of impact on actual enrolment rates.
 - Evidence also mainly focuses on post-16 learners; there is a lack of evidence of the impact of interventions happening earlier in the student life cycle.
- Providing financial aid is a high-cost intervention that has a small but positive effect on enrolment.
 - It appears to be most successful when efforts are made to raise awareness among potential beneficiaries and it is easy to understand and apply for.

- Mentoring, counselling and role models are generally associated with positive outcomes, especially when mentors are relatable, leading to increased confidence, higher aspirations and a better understanding of the world of HE.
- Providing information, advice and guidance to students during secondary school is a low-cost, light-touch tool, but appears to have limited impact on aspirations and enrolment.
- High-cost summer schools appear to lead to increased confidence and aspirations, but have mixed results in terms of actual applications and acceptances.
- The more promising interventions are those that are tailored to the students, start early and are integrated into other forms of support, such as career advice and guidance.

TASO is an independent 'what works' centre funded by the OfS and run by a consortium comprising King's College London, Nottingham Trent University and the Behavioural Insights Team.

Advance HE published [Increasing Diversity: Tackling underrepresentation of protected student groups in higher education](#), the report of a project with HE providers in England, Wales and Northern Ireland, exploring more 'ambitious' responses to tackling underrepresentation.

- The HE sector and individual institutions have explored different approaches to understanding and tackling underrepresentation of different student groups, but have been more cautious when considering targeted recruitment or outreach directly relating to protected characteristics.
 - The aim of the project was to build confidence and awareness in the sector of this potentially useful approach.
 - The project was based on ['Attracting Diversity'](#) – a project that ran from 2015 to 2018, involving Scottish colleges and universities and funded by the Scottish Funding Council.
- 13 recommendations are made for policymakers, institutions and project leads, including:
 - Develop skills and capacity for institutional research on issues of student equity, specifically around access and participation – both quantitative analysis and qualitative understanding.
 - Provide clarity and a public statement of support for undertaking positive action measures where appropriate and clear consensus on moving beyond 'deficit' models.
 - Provide a 'buddying' or networking scheme for institutions with similar challenges.
 - Support internal projects to work with other relevant equality change programmes wherever possible, and establish a senior 'champion' for the work.
 - Provide a 'research and evidence sponsor' to connect internal research expertise and institutional data analysis units with professional services actors and stakeholders.
 - Make space for 'difficult' conversations about equity and access; identify a senior sponsor to 'open doors'.
 - Amplify the voices of intended beneficiaries from the target groups, and ensure that students from the target groups are consulted and enabled to participate in project work or design.

The Unite Foundation published [Positive Impact? What factors affect access, retention and graduate outcomes for university students with a background of care or family estrangement?](#)

- The research was undertaken by a consortium comprising Sheffield Hallam University, the University of Oxford Department of Education and StandAlone.
- Findings include:
 - University is transformative: care leavers who complete their course can transcend their backgrounds and do at least as well in their future careers as other students; but too many care leavers and estranged students leave university early.
 - Bureaucracy is a barrier: students have to repeatedly reveal their personal situation to access the support and help they're entitled to, and this impacts on their mental health and wellbeing.
 - Support needs unity of purpose: too many young people are passed from pillar to post to get the help they need – they need a single point of contact to act as a mentor and guide.
 - There's still too much we just don't know: Government and the sector don't collect some fundamental information, e.g. the number of young people estranged from their families or the impact of bursaries on young people, so good evidence for what really works is impossible to find.

The Scottish Government published [Access to postgraduate study: Representation and destinations](#) – a discussion paper by Scotland’s Commissioner for Fair Access on the experience of students from the most deprived areas.

- Representation of full-time entrants from the 20% most deprived areas (Scottish Index of Multiple Deprivation, SIMD20) is lower at postgraduate (12.5%) than first degree level (15.6%), due to lower progression rates to postgraduate degrees for students from these areas.
- The differences in progression rates between students from the least and most deprived areas are related to differences in first degree outcomes, subject studied and institution attended.
 - Graduates from deprived areas are less likely to study subjects with the highest progression rates and mainly take subjects where they tend not to move on to postgraduate study.
- Differences in leaver destinations between SIMD20 leavers and other leavers at postgraduate level are starker than those at first degree level and persist when subject studied, institution attended and qualification type are accounted for.

One in a [series of papers](#) aiming to stimulate debate in the wider public.

GRADUATES & GRADUATE EMPLOYMENT

High Fliers Research published [The Graduate Market in 2020: Annual review of graduate vacancies & starting salaries at the UK’s leading employers](#) – a study of 100 graduate employers.

- The number of graduates hired by graduate employers grew by 6.2% in 2019, the largest increase for five years.
 - Public sector bodies were the largest employers of new graduates, overtaking accounting and professional services for the first time.
- Graduate recruitment was expected to rise by 3.3% in 2020.
 - The biggest growth was expected in the public sector, and in accounting & professional, banking & financial and technology companies.
 - Firms have been marketing their 2020 vacancies at an average of 24 UK universities.
- In 2019 over 75% provided paid vacation internships for penultimate year students; over 40% offered 6–12 month course placements for undergraduates.
 - 80% are offering paid work experience for students in 2019/20 (13,514 places); places were expected to grow by 3.0% in 2020.

This was published in January 2020, before the COVID-19 pandemic took hold.

Prospects Luminate published [How are graduate employers adapting to the challenge of COVID-19?](#), the results of a survey by the Institute of Student Employers (ISE). [Full results are only available to ISE members.]

- 92% of graduate employers reported that their teams were moving to home working, 85% were reducing travel and 95% moving meetings online.
- 69% had cancelled visits to universities and 63% had cancelled work experience placements.
 - Some mock and real assessment centres, talks, workshops and interviews were being cancelled, but others were taking place online or by phone.
 - Some elements such as group exercises have been cut as they are too difficult to recreate online.
- 27% said they would be recruiting fewer graduates, impacting an already-stagnant student labour market; 31% would be recruiting fewer short-term hires, such as interns and placement students.

The ISE stressed that this is a snapshot of a rapidly evolving situation, and many employers don’t know what the medium- and long-term implications will be. If the crisis continues, it could have a serious impact on the life chances of young people leaving the education system this year.

HESA and the University of Warwick published [How does the return to a degree vary by class of award?](#) drawing comparisons between the pay of graduates and non-graduates.

- Data were used from the British Cohort Study (of individuals born in 1970), Next Steps (those born around 1990), the Labour Force Survey and the Destinations of Leavers from Higher Education Longitudinal survey.

- The report considered non-graduates (holding at least GCSE or A level qualifications) and graduates in full-time employment.
- It looked for changes in the returns to a first-class or 2:1 degree compared with lower grades.
- Findings include:
 - Graduates born in 1970 who achieved a first or 2:1 earned 20% more than non-graduates at age 26, compared to 14% more for those with a 2:2 or below.
 - Graduates born in 1990 who had a first or 2:1 earned 14% more than non-graduates at age 26, compared to 3% more for those with a 2:2 or below.
 - The overall reduction in the return to a degree was largely due to stronger pay growth in non-professional compared to professional occupations.
 - The increased gap between the returns to higher and lower degree classifications, from 6ppt to 11ppt, may relate to workplace recruitment focusing on graduates with at least a 2:1.
- The research also compared the returns to a first with the returns to a 2:1, and the returns to a 2:1 with a 2:2, based on a small number of first-class degree holders born in 1970.
 - The relative benefit of having a first over a 2:1 has decreased by up to 3ppt, possibly due to the long-term trend of more graduates being awarded a first-class degree.
 - The relative benefit of a 2:1 over a 2:2 has increased by up to 8ppt.

England's Department for Education published [The impact of undergraduate degrees on lifetime earnings](#), a report by the Institute for Fiscal Studies analysing estimated returns by subject and institution type for English-domiciled students.

- The estimates are based on the earnings of individuals who were born in the mid-1980s and went to university in the mid-2000s.
 - Over their working lives it is predicted that men will be £130k better off on average by going to university; for women, this figure is £100k; for both it represents a gain of around 20%.
 - The 10% of graduates with the highest returns will on average gain around £500k in discounted present value terms.
 - Much of the variation is explained by subject studied: e.g. medicine and law students achieve very high average returns while few creative arts students will gain financially from their degrees at all.
 - While average returns to law and economics are high, the range of returns is wide – many students will see much lower returns and a few will see much higher returns.
 - In contrast, subjects such as education and nursing do not have very high returns on average, but women who study these subjects almost universally achieve positive returns.
 - 85% of women and 75% of men are expected to achieve positive net lifetime returns, but an estimated 20% of students – about 70,000 every year – would have been better off financially had they not gone into HE.
- Financing undergraduate degrees is expensive for the taxpayer, but the expected gain to the exchequer is around £110k per student for men and £30k per student for women, mainly driven by the highest earners.
 - The exchequer is expected to make a loss on the degrees of around 40% of men and 50% of women; however, this does not mean the Government is misallocating funds.

The modelling required to simulate earnings at age 30+ is inevitably difficult and imprecise. At the same time, it is not knowable what will happen to real earnings growth or retirement patterns in the future.

HEPI published [Getting on: Graduate employment and its influence on UK higher education](#), examining the increased focus on student transition into the workplace.

- Recent years have seen significant policy changes related to graduate outcomes and employability, including the introduction of:
 - the Longitudinal Educational Outcomes dataset tracking graduate earnings
 - the Teaching Excellence & Student Outcomes Framework (TEF)
 - England's Access & Participation Plans, which place greater focus on student transitions out of university
 - England's new regulator, the OfS, which includes among its four key objectives outcomes that 'enrich [students'] lives and careers'.

- These changes have been influenced by:
 - policymakers seeking to improve productivity and reduce the cost of HE by better understanding which graduates pay back their student loans
 - students entering university with high expectations that it will help them develop professional skills and gain experience relevant to their future career path
 - employers, who remain keen to employ graduates despite complaining that they are not ready for the workplace.
- Critics of this increased focus on employability believe it is taking away from the purpose of universities and having unintended consequences on the way they operate.
- A survey of UK heads of careers services shows these policy initiatives have led to changes – which they largely welcome – in the way universities operate.
 - ‘Graduate success’ is defined differently between careers services, universities and students, particularly when it comes to the use of metrics or broader measures.
 - Careers services have become more embedded in the strategic role of the university, but this is often not accompanied by increased resources.
 - Students are getting involved with the careers service earlier and are more likely actively to seek out its support.

Prospects Luminate published [Developing and Enhancing Graduates’ Career Resilience: Perspectives from Higher Education Careers Professionals](#), based on research undertaken in universities in the north east of England and Northern Ireland.

- Despite career resilience being cited as a key ‘feature’ in the landscape of the graduate labour market it remains highly abstract in application, with the range of definitions provided suggesting an absence of a concrete understanding.
 - Definitions include self-efficacy, confidence, ability to overcome obstacles and ability to ‘bounce back’, and are framed within highly individualised narratives within HE policy and practice.
- Challenges in supporting and developing career resilience within HE include: the heterogeneous student cohort; the need for a holistic approach; the dominant narratives of successful employment outcomes and associated performance metrics; and the changing role of careers professionals in HE.

[Gendered Career Pathways among Doctoral Graduates in the United Kingdom](#) by a University of Exeter researcher was published in *Social Sciences*, exploring career trajectories within seven to nine years of earning a degree.

- 51% of male graduates surveyed were employed in a permanent position six months after graduation, compared with 41% of female graduates.
 - Three years after graduation the figures were 74%/61%.
 - Seven to nine years after graduation the gap had decreased slightly (82%/75%), but 97% of men were working full-time compared with only 80% of women.
- The difference in career prospects was partly explained by 50% of men having obtained their doctorate in physical sciences and engineering, compared with only 25% of women.
 - Women were more likely to obtain their degree in the arts and humanities, social sciences or biomedical studies, where there were fewer work opportunities.
- The gender gap was considerably smaller in academia, where 72% of men were permanently employed compared with 69% of women; the figures for non-academic jobs were 91%/84%.
 - This may be because of stricter regulations in the academic hiring processes, and the fact that female PhD graduates are more likely to seek employment in academia than in other sectors.

Universities UK International (UUKi) published [Supporting International Graduate Employability: Making good on the promise](#), in collaboration with the Association of Graduate Careers Advisory Services, the UK Council for International Student Affairs and Coventry University, outlining current good practice across the UK based on a survey of 43 institutions.

- How universities support their international students’ employability is increasingly a factor in such students’ decision-making.
- Among the findings:

- 86% rate demand for career and employability services from international students as very or fairly high, but only 28% feel that they are able to meet that demand.
- 44% don't provide any tailored support to international students but they are able to access the same support as UK/EU students; 28% of services offer specialist staff.
- International students and graduates face significant barriers to gaining work experience in the UK, and accessing the new graduate route, while welcome, is expected to be insufficient alone to overcome these barriers.
- 83% of respondents provided information about working in other countries and 72% have built relationships with employers/recruiters overseas.
- In 83% of HEIs, university departments and student union branches collaborate to support international student/graduate employability, although others lack a joined-up approach.
- 41% of HEIs collaborate with others to support international graduate employability, through e.g. joint careers fairs, interest groups and regional forums, shared resources, joint webinars and information events and collaborative employer visits.
- International alumni are recognised as a vital resource to build connections with overseas employers and gain labour market insight, but they could be better utilised.
- 69% of HEIs monitor their international graduate outcomes, mostly through the Destination of Leavers from Higher Education survey; however, respondents have significantly mixed views of using such data to assess the quality of support provided.

HIGHER EDUCATION: TEACHING, RESEARCH & INSTITUTIONS

The Open University (OU), with Dublin City University National Institute for Digital Learning, published [*Innovating Pedagogy 2020: Exploring new forms of teaching, learning and assessment, to guide educators and policy makers.*](#)

- It proposes ten innovations that are already currency but have not yet had a profound influence on education, including:
 - **AI:** student-facing applications include intelligent and dialogue-based tutoring systems, exploratory learning environments, automatic writing evaluation, and conversational agents; teacher-facing applications might support teachers to enhance their own teaching.
 - **E-sports:** a way of reaching young people and connecting them to virtual sporting activities; can support digital literacy, numeracy, socialisation and teamwork; also a potentially powerful informal and 'organic' way for students to engage with content.
 - **Multisensory learning:** such experiences have become popular in entertainment, tourism and healthcare; it can enhance communication, engagement, memorisation and understanding.
 - **Offline networked learning:** using low-cost, low-power network hubs such as the Raspberry Pi, it can support conversation, collaboration, resource sharing, visualisation and consolidation in locations where internet access is limited.
 - **Online laboratories:** an interactive environment for conducting simulated experiments; can also allow students to interact with real equipment in 'remote labs'.
 - **Social justice pedagogy:** educating and enabling students to become active citizens who understand social inequalities and can contribute to making society more democratic and egalitarian; stresses the importance of involving and engaging students in building the curriculum.

Jisc published [*The future of assessment: Five principles, five targets for 2025 – the report of discussions to inform its Education 4.0 work on using technology to improve assessment.*](#)

- Universities and colleges could use technology to transform assessment by making it more authentic, accessible, appropriately automated, continuous and secure.
- Targets for 2025 concentrate on:
 - shifting focus from particular knowledge to transferable skills, assessed more realistically
 - using 'accessibility-first' assessment design that allows the same test to be offered in multiple ways
 - balancing automated and human marking and feedback for maximum learning benefit
 - using data and analytics widely to assess the effectiveness of continuous assessment and to plan strategies

- the general adoption of authoring detection and biometric identity authentication for remote supervision.

HEPI published [From T to R revisited: Cross-subsidies from teaching to research after Augar and the 2.4% R&D target](#), focusing on the additional challenges that would arise if the Government opted to continue holding down funding per student.

- The data are mostly taken from TRAC (Transparent Approach to Costing), a system adapted to help HE providers understand the costs of their activities (teaching, research and other).
 - As the TRAC data for England and Northern Ireland are published together, Northern Ireland is sometimes included alongside England.
 - The picture is primarily of England because that is the focus of the Augar report, but the financial situation on cross-subsidies is broadly comparable for the whole UK and the other parts of the UK.
- University research is underfunded against its true costs – the latest figures show a gap of £4.3b across the UK and £3.7b in England and Northern Ireland.
 - The shortfall in research funding has been partially filled by cross-subsidies from international students' fees, with each student paying £5,100 more on average than the cost of their education.
- Depending on how the Government responds to the Augar review's recommendations on tuition fees, the shortfall on teaching home undergraduates could increase by £0.7b–£2.3b above the current level of £0.2b.
 - A larger gap will need to be covered by increases in productivity, a deterioration in the student experience or redirecting the international student cross-subsidy.
- If international student fees are used to fill in or reduce the larger funding gap, they will no longer be available to cross-subsidise research, resulting in a potential annual research deficit of £4.9b in England and Northern Ireland.
 - This will make it very challenging to reach the Government's target of spending 2.4% of GDP on R&D by 2027, especially when combined with other potential obstacles.
 - The splitting of teaching from research in Whitehall could hamper a joined-up approach to the different activities undertaken by HEIs.
- An increase in overseas students could relieve some of the financial pressures but is not inevitable, given international competition, changing geopolitics and the Home Office's general approach in recent years to international students.
- If policymakers want to hold down tuition fees, preside over improvements to the student experience and ensure much greater R&D spending, they are likely to need to spend more than planned.

Policy Exchange published [Universities at the Crossroads: How higher education leadership must act to regain the trust of their staff, their communities and the whole nation](#), based on over 50 wide-ranging interviews across all four UK nations.

- The interviews were with HE leaders past and present, 'on and off the record'.
- The sector is not in crisis, but in some critical areas universities have lost the trust of the nation, allowing themselves to be perceived negatively.
 - Universities need to be clearer about the value they add, think longer term and change the way they engage with key stakeholders.
 - The sector needs to build bridges and demonstrate that it is a national asset, prized by the whole nation and capable of engaging with the values of those outside the educated metropolitan elite.
 - It needs to be clearer and more honest about what is in its scope to change, and where responsibility has to be more widely shared.
- The coming year should give all UK governments, regulators and funding bodies the opportunity to think more strategically and work with the sector more effectively to deliver greater economic impact in target regions and take a more systemic approach to achieving social mobility.
- Recommendations for the sector include:
 - Be proactive and deliberate in engaging with employers in addressing not just skills gaps but also knowledge gaps, thereby transforming the ecosystems of which HEIs are part.
 - Encourage government to adopt a joined-up strategy to improve social mobility, recognising that there are limits to what universities can achieve alone in widening access.

- Develop and adopt strategies that more explicitly reflect the interests of the communities that HEIs serve.
- Reverse recent trends on increasing grade inflation and unconditional offers to restore confidence among the public and employers in the value of a UK honours degree.
- Do more to level up the whole of the UK in terms of skills, dealing with the perceived problem of low quality and low value degrees.
- Devote real effort and resources towards reversing the decline in part-time education, encouraging lifelong learning and increase the provision of adult learning.
- Champion excellence and widen access to those from under-represented or deprived backgrounds.
- Support investing more in research to achieve excellence and rebalance funding to focus on lagging regions, demonstrating the impact of research and the difference it makes to different parts of the population.

HEPI published [Making Universities Matter: How higher education can help to heal a divided Britain](#).

- With our exit from the EU settled, universities find themselves on the losing side of a major national debate, and in serious danger of continuing to be out of step.
- As the nation's economic and social model is fundamentally reshaped, universities need to be part of the conversation and reach out to parts of the country that have felt left behind.
- Universities must become a critical resource to their localities and to government; to be a force for social good there needs to be significant reshaping of funding, responsibilities and incentives.
- The vision is built around three interlocking ideas:
 - **Partnerships:** a National Skills Council for England, comprising colleges, universities, sector bodies and funding agencies, with oversight of a new £400m Future Economies Programme to drive collaboration around skills shortages and educational disadvantage, including university/college local skills agreements.
 - **Progression:** a 'First-in-Family Allowance' ensuring the first year of a degree is free of tuition fees; the sector and government each commits £25m per annum for five years to build on the National Collaborative Outreach Programme, providing tailored support, advice and information.
 - **Place:** government earmarks £500m for a Regional Growth & Innovation Fund; the sector sponsors the development of a civic index to help institutions monitor their engagement activity.

Although the recommendations apply only to England, the report makes reference to initiatives in the other UK nations and has wider relevance.

ESRI published [The determinants of degree programme satisfaction in Studies in Higher Education](#), based on a European dataset for graduates. [Login is required to access the full article.]

- Factors influencing student satisfaction are explored, including the relative importance of human capital, course composition and subsequent employment outcomes.
- Aspects of the degree programme related to the mode of teaching and personal development are found to be considerably more important in determining satisfaction than the field of study or the subsequent jobs obtained.
 - Practical learning approaches and an experience that enhances non-cognitive personal development are some of the course attributes most valued by students retrospectively.

CESifo published [Class Size Effects in Higher Education: Differences across STEM and Non-STEM Fields](#), using administrative data from a large UK HEI, providing a sample of 25,000 students.

- Overall, larger classes are associated with significantly lower grades, with no effect in non-STEM fields, but a large effect in STEM fields.
- Allocating resources to reduce class sizes would have a significant impact on student achievement in STEM disciplines, particularly on students from a low socioeconomic background, those with higher attainment in A levels and male students.

WORKFORCE ISSUES

The University & College Union published [Second class academic citizens: The dehumanising effects of casualisation in higher education](#).

- Casualisation is a significant problem for UK HE, where it has become a business model on which universities depend.
 - In 2017/18, almost 33k researchers (67%) and 30k 'teaching only' staff (49%) were on fixed-term contracts; over 6,500 academic staff were on zero-hours contracts.
 - Nearly 70k academics were employed as 'atypical', were not counted in the main staff record and were doing a significant proportion of the teaching in many universities.
- Casualised academic labour is dehumanising because it:
 - renders staff invisible to colleagues and institutions, treating them as second-class academic citizens
 - leaves staff vulnerable to a whole range of exploitative and demeaning practices, placing them in degrading patronage networks
 - denies agency and curtails the academic freedom that is a hallmark of the profession
 - prevents staff from rendering a long-term narrative of their careers that can provide meaning to their lives.
- Recommendations include:
 - The Government should demand comprehensive data about universities' reliance on casualised labour in teaching.
 - HE employers should end the culture of casualisation and negotiate the transition of precariously employed staff onto more secure contracts.
 - Research councils should make it a condition of grant to employ research staff on open-ended contracts and to support greater stability of employment.

The Wellcome Trust published [What Researchers Think About the Culture They Work In](#), based on a literature review and UK-wide interviews, workshops and a survey.

- 84% say they are proud to work in the research community, but only 29% feel secure pursuing a research career.
- 78% think that high levels of competition have created unkind and aggressive conditions.
 - 61% have witnessed bullying or harassment and 43% have experienced it themselves.
 - Just 37% feel comfortable speaking up, with many doubting appropriate action will be taken.
 - 53% have sought, or have wanted to seek, professional help for depression or anxiety.
- 80% of researchers who manage people say they have the knowledge and skills to manage a diverse team, but only 48% have received training.
 - Only 55% of those being managed have received feedback on their performance and only 49% have had a formal appraisal in the past year.
- 75% believe creativity is currently being stifled.
- 69% think that rigour of results is considered an important research outcome by their workplace, but 23% of junior researchers and students have felt pressured to produce a particular result.
 - 43% believe that their workplace puts more value on metrics than on research quality.
- The implications are concerning:
 - For researchers, poor research culture is leading to stress, anxiety, mental health problems, strain on personal relationships and a sense of isolation and loneliness at work.
 - For research, the perceived impacts include a loss of quality, problems with reproducibility, and the cherry-picking of results and data massaging.
 - For society, the dangers are seen as loss of talent from the sector and a reduction of real innovation and impact resulting from a narrow set of priorities, plus a loss of public trust.

Advance HE published [The Future of Athena SWAN \[Scientific Women's Academic Network\]: The report of the Athena SWAN Charter Review Independent Steering Group for Advance HE](#).

- The Athena SWAN Charter is a programme for the advancement of gender equality in universities and research institutes.
 - It was established in 2005 to recognise good practice in the representation and career progression of women in STEM and medicine (STEMM).

- In 2015 it was expanded to include staff in arts, humanities, social sciences, business and law, plus staff in professional, technical and operational roles.
- It now also recognises work to address gender equality more broadly, not just barriers to progression that affect women; there are 164 Athena SWAN members in the UK and RoI.
- The report recognises the Charter's effectiveness while recommending changes, particularly to improve the application and assessment processes, to embrace the wider definition of gender and increase training and support.

The Workplace

APPRENTICESHIPS & TRAINEESHIPS

EDSK published [Runaway training: Why the apprenticeship levy is broken and how to fix it](#), investigating the system in England.

- Following the introduction of the apprenticeship levy in April 2017:
 - Apprenticeship starts fell from 564,800 to 364,000 a year.
 - The proportion of training at L2 (equivalent to GCSEs) fell by 15ppt, while L4–7 (equivalent to the first year of university up to master's level) grew by 9ppt.
 - There has been a 5ppt drop in the proportion of young people starting an apprenticeship, while 66% of higher level apprenticeships have been started by workers aged 25+.
 - 46% of 'apprentices' were with their employer for at least six months before starting training.
- Although high-quality, rigorous apprenticeships have been offered since the reforms began, there is still no clear, agreed definition of an apprenticeship.
- Three types of 'fake' apprenticeships account for 50% of all apprenticeship starts in the period:
 - Low-skill and generic roles, such as being part of an airline cabin crew, which are advertised outside of apprenticeships, offering minimal training and low wages
 - Management training and professional development courses
 - Bachelor's degrees and master's-level programmes which can already be funded through the student loan system.
- The Academic Professional apprenticeship – which typically requires a PhD for admission – re-labels university academics as apprentices in order to use up universities' own levy contributions.
- The register of approved providers now includes around 2,500 organisations – almost three times as many as when the levy was announced.
 - Some have failed their first Ofsted inspection for merely accrediting existing skills and having some learners who were unaware they were on an apprenticeship.
 - The OfS has been put in charge of monitoring higher level apprenticeships, despite having no expertise and no powers to carry out onsite inspections.
- Recommendations include:
 - Introducing a new definition of 'apprenticeship' benchmarked against the best in the world, and restricting training to L3.
 - Renaming the levy the 'technical & professional education [TPE] levy', excluding bachelor's and master's-level courses and introducing co-payments tiered from 0% at L3 to 75% for L6.
 - Making Ofsted the sole regulator for any apprenticeships and TPE funded by the new levy.

CVER published [Exploring trends in apprenticeship training around the introduction of the Apprenticeship Levy: Emerging evidence using a matched apprentice-employer dataset](#), examining the situation in England.

- The number of apprenticeship starts has fallen significantly since the introduction of the apprenticeship levy, from around 0.5m to around 0.4m per year in 2018/19.
 - There are now around 12 apprenticeship starts per 1,000 employees in SMEs and 15 starts per 1,000 employees in enterprises with 250+ employees.
 - Approximately 50% of all apprenticeship starts are now levy funded.

- There has been an acceleration in the switch from intermediate to advanced and higher apprenticeships, with almost 20% now at higher level compared with only 4% in 2014/15.
 - Intermediate apprenticeships have fallen from 60% in 2014/15 to only 37% in 2018/19.
- Most apprenticeship starts are in health, education & public administration and services industries.
- There does not appear to be a direct association between the introduction of the levy and the decline in the number of apprenticeship starts – large enterprises, more likely to be paying the levy, experienced a smaller reduction in the number of starts than smaller enterprises.
- For smaller enterprises, the strong decline in starts may be linked to a combination of:
 - adapting to the new funding system
 - the constraints on the pool of funding actually available for apprenticeship training
 - the ongoing switch from apprenticeship frameworks to apprenticeship standards, which have higher quality requirements.

TRAINING & DEVELOPMENT

The OU published [Leading in a Digital Age](#), analysis of a survey of 950 chief technology officers (CTOs) and senior managers in SMEs and large companies in the UK.

- The report explores whether senior leadership teams currently have the skills and training to lead organisations and take advantage of the opportunities of digitisation, and examines how they can acquire these skills and foster a culture of digital adaptation.
- There is a growing gap between sectors:
 - The IT and tech sector spend the most on digital training, followed by financial services, with others such as education and the public sector some way behind.
 - 32% of those in the hospitality industry say they are currently not 'tech-first', but 76% think that embracing new tech is essential for their survival.
- CTOs and senior leaders who have received digital training report improved business performance.
 - 88% of those who had received digital training in the last year reported organisational growth, compared with 49% who hadn't had any training.
 - 56% who had digital skills training reported improved productivity, 55% greater employee engagement, 42% enhanced agility, 42% increased profit and 33% improved staff retention.
 - 83% of those who have received digital training feel more inclined to encourage colleagues and staff to undergo similar training.
- Many leaders say they and their organisation lack the requisite skills to manage in the digital age.
 - 44% say their organisation is lagging behind with new technologies e.g. AI, augmentation and automation.
 - 64% tend to buy in the digital skills they need rather than train their workforce.
 - 76% say they would benefit from more digital training but 37% are unsure where to start to develop their own skills.

The Institute of Labor Economics (IZA) published [Financing Constraints and Employers' Investment in Training](#), a study based on a representative sample of European firms.

- In 2017 ~20% of companies in the EU reported to have invested too little in training their workforce.
- The study used survey data on investment activities and administrative data on financial statements covering 2015–2017 to develop an index of financing constraints for the 27 EU member states and the UK.
- Results indicate:
 - An estimated 10% increase in the financing constraints index reduces investment in training as a share of fixed assets by 2.9–4.5% and investment in training per employee by 1.8–2.5%.
 - An estimated 34% reduction in the index, bringing the European average down to the German average, would increase the investment in training per employee by 6.1–8.5% and firm productivity by 2.0–2.7%.
- Among the findings:

- Firms facing tighter financing constraints reduce their investment in training and tangible assets less than their investment in R&D and software and data.
- Investment in training varies substantially within the EU; firms in Central, Eastern and in some Southern European countries are investing much less than those in Northern and Western Europe.
- Policies that reduce financing constraints can foster employers' investment in training, with positive effects on productivity, but are unlikely to close the training gap between European countries; the gap is likely to also depend on differences in economic institutions, industrial structures, innovation activities and the relative supplies of skills.

IZA published [Employer Provided Training in Europe: Determinants and Obstacles](#), a study based on a literature review and data from the European Investment Bank's Investment Survey and Eurostat's Continuous Vocational Training Survey.

- In 2016, participation of 25–64 year-olds in job-related education and training in the EU was 35.9%, 89.1% of which was sponsored by the employer.
- The current economic context, including rising inequalities, an ageing population, progressive digitalisation and automation, increases the need for retraining and adult learning.
 - Firms invest in training to increase productivity and to update workers' skills.
 - Training investment is higher when the economy is growing, and in areas which invest more in R&D and have a higher share of the well-educated labour force.
 - Higher product market competition also appears to favour training outcomes.
 - However, more employment protection and longer average job tenure tends to lead to fewer firms providing training, possibly because a greater number of workers are then on temporary contracts and receive little or no training.
- A holistic approach is required to raise companies' investment in training, and support for training needs to be backed up by assessment to ensure its effectiveness.
 - Analysis can help to identify the best responses to common challenges and their implications for training policies, e.g. maintaining sufficient levels of training investment with an ageing workforce, low training participation of lower skilled workers, and responding to rapidly changing skill needs linked to digitalisation.

CVER published [Employee Training and Firm Performance: Quasi-experimental evidence from the European Social Fund](#), examining the effects of a large training grants programme in Portugal.

- The FIG programme, launched in 2008, provided grants to support 30–80% of the costs of a company's training, in particular in the context of technical, technological and organisational change.
 - Grants averaging €30k were given to companies to support the training of employees of different skill levels, from factory workers to managers, and in diverse areas, including innovation, marketing and international trade.
- Among the findings:
 - Deadweight losses were limited, at no more and possibly much less than 24%.
 - Several aspects of company performance were impacted positively by the increase in training – sales, value-added, employment, productivity and exports all increased.
 - Firm survival was also positively affected, in part driven by the significant number of small firms that participated in the programme.
 - The employment effects were driven both by increased hiring and reduced 'separations', with the latter making a stronger contribution, suggesting that training grants can play the role of a labour market policy that increases the resilience of existing jobs.
 - The training didn't have an effect on wages; this is probably because new hires are typically paid lower wages, depressing a firm's average wages.
 - Training didn't have a weaker effect for firms with less educated workforces; indeed, sometimes the effects were stronger, suggesting it contributed to employability and equity as well as firm efficiency.

SKILLS GAPS & SHORTAGES

England's Department for Education published [Working Futures 2017–2027: Long-run labour market and skills projections for the UK](#), presenting historical trends and future prospects by sector for the UK and the four nations.

- The report makes a number of projections around the size of the labour force, the number of jobs, sectors likely to grow or shrink and the balance between full- and part-time employment, grounded in a forecast of macroeconomic and labour market contexts.
- It predicts:
 - There will be a continued trend in favour of more highly skilled, white-collar occupations, but with some growth in employment for a number of less-skilled occupations.
 - The number of jobs in occupations typically requiring a high-level qualification will continue to grow, albeit more slowly than over the previous decade.
 - The supply of highly qualified people will grow more quickly than demand; this does not necessarily indicate an excess supply as, in many occupations, the nature of jobs is changing.

City & Guilds Group published [Missing Millions Considering the untapped potential of millions of working age people in the UK](#), modelling the UK jobs market in 2027 and presenting findings from a survey of 5,000 working-age people across the UK.

- 42.2% of UK jobs in 2019 were high-skilled roles (51.6% of London's), up 13% since 2011; high-skilled jobs are predicted to grow by 2.1% to 2027.
- 39.3% of the UK is qualified to NVQ L4 or above, ranging from 51.3% in London to 30.5% in the West Midlands.
- While there are a few industries that dominate the labour market in every region, e.g. health & social care and retail, there are niche industry clusters specific to certain areas, each of which has a predicted different level of growth or decline.
- Among the survey findings:
 - People from more affluent backgrounds were more likely to feel positive about their career prospects (39%) than those from less affluent backgrounds (22%).
 - Positivity ranged from 41% in south east England to 24% in north east England and Northern Ireland; 46% of 25–34 year-olds were positive compared with 27% of those aged 55+.
 - 37% of those who felt negative cited lack of opportunities in their area, and 30% lack of opportunities in their company; 26% cited lack of skills.
 - Among those feeling positive, 55% felt they had the right skills to progress, while 35% felt there were opportunities in their area and 32% in their company.
 - 32% had received workplace training in the last six months, while 8% hadn't received any in at least five years and 11% for over a decade; 15% said they had never received any; 55% intended to undertake some training in the next year.
 - 60% said that their skills were under-used at work at least 50% of the time; only 9% felt they were never under-used.

The independent Financial Services Skills Taskforce, commissioned in 2018 by HM Treasury and chaired by former City Minister Mark Hoban, published its [Final Report](#).

- Changes in the workplace due to globalisation and technological and demographic shifts demand a new approach from financial firms to attract, motivate and retain future talent.
 - The sector must become more attractive and compelling as a career path if it is to redress a decline in top-performing school leavers and graduates looking to work in the sector, and more closely compete with the increasingly popular tech sector.
 - There is also an increasing demand for different skills and knowledge to respond to increasing technical and digital requirements.
- The UK financial services sector must address fundamental challenges to ensure it remains globally competitive; there are five core recommendations:
 - Reskill, upskill and retrain staff while protecting and expanding employment in key regional and national centres.
 - Create an industry-wide future-skills framework linked to an accreditation programme.

- Attract, motivate and retain the widest and deepest pool of talent.
- Strengthen the purpose and culture of the sector to ensure it remains attractive to future generations of talent.
- Establish an independent, employer-led financial services skills commission to take forward the recommendations and collaborate with national and regional partners to create change at scale.

AUTOMATION & AI: IMPACT ON WORK

The Northern Ireland Department for the Economy (DfE) published [*Intelligent futures: Working with automation & digitisation to deliver sustainable employment and growth*](#) by the Ulster University Economic Policy Centre (UUEPC).

- Automation creates anxiety for many, as it is viewed as a threat to future employment.
 - Both the economy-wide and the individual perspective need careful consideration in designing policy responses.
- The macro perspective demonstrates that automation is a route to: increased productivity; better margins; reduced costs; better health and safety outcomes; and the ability for companies to increase market share and potentially increase employment.
 - Automation creates more employment opportunities than it removes.
 - 70k employment opportunities could be created in Northern Ireland, alongside increased productivity, additional GVA and higher standards of living.
- The micro perspective is largely based on skills; if individuals possess skills that are not easily automated, such as creativity, empathy, problem-solving, persuasion and system-based skills such as data analytics, they are likely to do well.
 - If individuals do not possess these skills and are employed in roles that are easily automated, their employment and earnings potential is likely to be eroded.
 - Policy needs to focus on reskilling lower skilled and lower income groups.
- There is significant debate about whether automation is likely to increase income, gender, age or geographic inequalities or help to address them.
 - Automation is likely to concentrate additional wealth in higher income groups, and policy needs to focus on potential options for redistribution of income and enhancing skills and employability.
 - Technology provides the opportunity to work remotely, but sectoral concentrations suggest that areas with good employment are likely to benefit most from additional growth.
 - The removal of 'male only' tasks and the creation of opportunities suitable for both males and females would suggest that automation should improve gender balance in the workforce; however, more men work in sectors likely to be adversely impacted and more women work in healthcare, which is likely to grow significantly.
 - Older workers are the least likely to have the skills for a more automated environment; this will particularly affect manufacturing, which employs large numbers of those aged 50+.
- While Northern Ireland's education system has a strong track record, more can be done to help future-proof skills:
 - Those in industry acknowledge that it is difficult for educators to design courses and curricula that keep up with technological change and that the earning potential for those with key skills is significant in the private sector.
 - Smaller enterprises struggle to retain labour when larger organisations offer better terms and conditions; policymakers will want to focus on achieving the appropriate balance of ICT skills, migration policy and foreign direct investment policy – more research is needed.
 - The education system must instil a deep understanding of technology and how to extract and use data effectively; this will require a range of technical and 'soft' skills.

An infographic-style [summary report](#) is also available.

Acas published [*My boss the algorithm: An ethical look at algorithms in the workplace*](#), exploring three main areas of use – recruitment, task-allocation and workforce monitoring and performance review.

- There are two clear benefits on offer:
 - Improved productivity through time saved and more efficient decision-making

- New insights into workplace behaviour, human relationships or other trends as a result of vast data processing that can enable whole new solutions to workplace problems.
- There are two clear risks and drawbacks:
 - A threat of increased management control without corresponding consent from the workforce, particularly in areas of surveillance and performance monitoring
 - A danger of eroding human autonomy by replacing the personal relationships of line managers and their reports with a dehumanised system of being managed by a machine.
- There are two related areas that could be both opportunities and risks, depending on how the technology is used and how suitable the tasks are to which it is allocated:
 - The impact of algorithms on increasing or reducing bias
 - The impact on increasing or reducing accuracy of decision-making.
- Recommendations:
 - Algorithms should be used to advise and work alongside, but not replace, human line managers.
 - Employers should understand clearly the problem they are trying to solve and consider alternative options before adopting an algorithmic management approach.
 - Line managers need to be trained in how to understand algorithms and how to use an ever-increasing amount of data.
 - Algorithms should never be used to mask intentional discrimination by managers.
 - There needs to be greater transparency for employees (and prospective employees) about when algorithms are being used and how they can be challenged.
 - Agreed standards are needed on the ethical use of algorithms around bias, fairness, surveillance and accuracy.
 - Early communication and consultation between employers and employees is needed to ensure new technology is well implemented and improves workplace outcomes.
 - Company reporting on equality and diversity should include information on any use of relevant algorithms in recruitment or pay decisions and how they are programmed to minimise biases.
 - The benefits of algorithms at work should be shared with workers as well as employers.
 - A wider debate is needed on the likely winners and losers in the use of all forms of technology at work.

The Institute for Ethical AI in Education published [Towards a Shared Vision of Ethical AI in Education \[AIEd\]: Interim report](#).

- The benefits of AIEd stem from three fundamental factors:
 - Increased capacity and productivity
 - Valuable insights that can enhance teaching and learning
 - Autonomous learning recommendations that enable individualised instruction and personalised learning at scale.
- Risks include:
 - Decreased learner agency and increased reliance on AI systems
 - Threats to data security
 - Unfair discrimination due to algorithmic bias
 - Invasion of privacy
 - Lack of transparency
 - A reduction in interpersonal skills
 - Greater educational inequality
 - An erosion of accountability.
- The report presents a blueprint for an ethical framework and some possible guidelines for realising it.

Nesta published an updated and expanded [AI Governance Database](#) covering global activities; it was originally published a year ago.

- It is clear that existing mechanisms such as competition and data protection law are ill-equipped to address all the challenges that the pervasive use of algorithmic systems presents.
- 2019 may be remembered as the year when ‘the familiar imperative to “move fast and break things” finally lost its appeal and societal reflection started to shift to a deeper level of questioning about how technology can serve the public good’.
- Looking ahead:
 - Facial recognition and ‘deepfakes’ technology (synthetic media in which someone in an existing image or video is replaced with another person’s likeness) will continue to dominate the regulatory discussion; but there needs to be more emphasis on aspects such as directly addressing the extractive business models of large technology companies.
 - Talk of commitment to human rights must translate into action in order to avoid the use of AI-tools for controversial goals.
 - Beyond data protection, the role of privately owned and operated optimisation infrastructures needs to be recognised, and moved from a focus on technology adoption to questioning the desirability and appropriateness of AI-based solutions to various problems.
- The choices made today with regard to norms, standards and laws will provide the basic architecture for future innovation, and must be right.

Nesta published [*Is the UK getting innovation right? A survey of perceptions of the impact of innovation and technology*](#), based on a multi-phased research project run over autumn 2019.

- 66% of respondents found no agreement around a long-term vision for the UK following two years of preparations for a new future outside the EU, and people are worried about what lies ahead.
 - 58% say it is the role of government to use innovation to plan for the future.
- People also want innovation to be a force for social change as well as economic growth.
 - They want innovation to be used to tackle inequality, but don’t see it having that effect at present.
 - 55% are prepared to limit types of innovation likely to lead to inequality or disadvantage certain groups.
 - People are keen to see innovation benefit the whole country, and are willing to make some trade-offs to see this happen, e.g. having a smaller impact on a greater number of people
 - People believe government investment should focus on helping all parts of the UK become more prosperous; 67% are willing for some areas to grow more slowly as a result.
 - People believe we should be investing in innovation that has a positive social impact, e.g. making the population healthier, even if it doesn’t necessarily also contribute to economic growth.
 - People want to see innovation used to address the causes of climate change, with samples from Scotland and Wales citing this as the most important innovation priority.

Nesta published [*The future of minds and machines: How artificial intelligence can enhance collective intelligence \[CI\]*](#), aimed at innovators working in public sector and civil society organisations, as well as technology and research communities.

- AI models are typically most useful where a ‘ground truth’ is well defined and the data sources that the AI model uses as input do not frequently change.
 - The ability of AI to find patterns in huge amounts of data is useful to streamline decision-making.
- However, in the case of many complex real-world problems, the dynamics of the situation might lack historical precedent.
 - The human ability to adapt to new situations, understand context and update knowledge fills in the data gaps of machines.
 - At the collective level, attributes of human intelligence include the ability to tell collective stories as an act of sense-making and learning.
- The most common challenges that stand in the way of making the most of CI approaches to solving problems fall into three broad categories: making sense of the data; setting the right rules for exchanging information and skills; and overcoming human cognitive biases.
 - In recent years, experiments in CI design have expanded to include AI in order to address one or more of these challenges.

- At least four ways have been identified to understand the different forms of interaction between crowds and machines, each illustrated by a case study:
 - Machines working on data generated by people and sensors
 - Machines and people taking turns to solve problems together
 - People and machines solving tasks together at the same time
 - Using machines to connect knowledge and tasks in groups.
- Among the recommendations:
 - For policymakers: put CI at the core of all AI policy in the UK; create testbeds for experimentation to accelerate learning.
 - For funders: launch a new dedicated funding programme for AI and CI R&D; invest in new partnerships and governance models for AI and CI experiments.
 - For research and practitioners: build a new interdisciplinary field and link to real-world practice; accelerate progress on AI and CI research by committing to open science and evaluation.

The report also proposes a number of criteria that should be considered in any AI and CI project.

IZA published [The Future of Work: Challenges for Job Creation Due to Global Demographic Change and Automation](#).

- An estimated 340m jobs will be needed between 2020 and 2030, based on trends in population growth, and changes in age structure, in the gender composition of the workforce, and in age- and gender-specific workforce participation rates.
 - Job creation requirements are split unequally among country income groups – most will be needed in low- to middle-income countries.
 - Job creation needs due to automation are substantial but not insurmountable.
- Industrial robots are predicted to replace between 12.2m and 37.9m workers in 2030.
 - Manufacturing workers are likely to be the most vulnerable, with the largest number of jobs substituted in Asia.
- From a policy perspective:
 - For lower income countries, investing in high quality school education will be important to enable them to compete with other lower income countries and with robots in higher income countries.
 - For higher income countries with an ageing workforce, the challenge will be to keep older workers healthy and in productive work; automation could be beneficial, and investment in lifelong learning programmes is essential.
 - Economic policies can play a role in facilitating the process of job creation by providing supportive legislation, by ensuring that workers have the required skills and by promoting healthy ageing.

The World Economic Forum (WEF) published [Jobs of Tomorrow: Mapping Opportunity in the New Economy](#), reviewing the shift to emerging professions and the skills they will require.

- Demand for both 'digital' and 'human' factors is driving growth in the professions of the future.
 - The adoption of new technologies is giving rise to green economy jobs, roles in the forefront of data and AI, and new roles in engineering, cloud computing and product development.
 - The continuing importance of human interaction is giving rise to greater demand for care economy jobs, roles in marketing, sales and content production, and roles at the forefront of people and culture.
- There are seven emerging professional clusters, and 96 jobs of tomorrow within these, that vary in their individual rate of growth and in the scale of job opportunities they offer in the aggregate.
- 'Scale of job opportunities' is measured as the number of job opportunities offered by the cluster for every 10k job opportunities offered across the global labour market.
 - In 2020, the featured professional clusters will represent an estimated 506 out of every 10k job opportunities; by 2022, this will have risen to 611 out of every 10k job opportunities.
 - Growth is largest among care roles and smallest among green professions.
- The emerging professions will account for 6.1m opportunities globally in 2020–22; if current growth trends hold, they will provide 1.7m new jobs in 2020, rising to 2.4m opportunities by 2022.

- Over the coming three years: 37% of projected job opportunities in emerging professions will be in the care economy; 17% in sales, marketing and content; 16% in data and AI; 12% in engineering and cloud computing; 8% in people and culture; and 1.9% in the green economy.
 - The highest-growth jobs of tomorrow span all seven profession clusters.
- The highest-demand skills span both technical and cross-functional skills, and can be divided into five distinct clusters: business skills; specialised industry skills; general and soft skills; tech baseline skills; and tech disruptive skills.

SKILLS POLICY

Policy Connect and L&W published [England's Skills Puzzle: Piecing together further education training & employment](#), the report of a year-long inquiry.

- To grasp the opportunities of the digital age, England needs a long-term, cross-party commitment to a stable national framework of provision.
 - It should facilitate employer engagement and provider collaboration, and ensure that learners have clear signposting and support to access outstanding learning.
 - There are many examples of excellent practice, but they aren't yet joined up as an ecosystem; we need to avoid piecemeal initiatives that threaten to damage the ecosystem as a whole.
- Among the challenges:
 - Employers – particularly SMEs – struggle to engage with a fragmented system that is subject to a turbulent policy environment.
 - The highly centralised skills policy lacks local levers to tailor provision to local need; the 'one-size-fits-all model' is ill-suited to the diversity of England's regional economies and communities.
 - Poor career education, information, advice and guidance (CIAG) has a major impact, with learner choice poorly aligned to the pathways that could lead to better financial returns.
 - Funding arrangements are also encouraging the wrong kinds of behaviour; providers should be competing on quality and collaborating around labour market need.
 - The system is failing to promote and encourage lifelong learning.
- Recommendations include:
 - A long-term framework for skills and lifelong learning underpinned by ten- and 20-year targets, set out in legislation
 - Stronger geographical and sectoral skills needs analyses, with devolved commissioning powers
 - Multi-year education budgets for providers, which incentivise and require them to meet local learning aims and skills gaps, competing on quality not student capture
 - A new local collaboration fund for projects and partnerships between providers and employers
 - Expansion of schemes to encourage skilled technical trades people to retrain to teach in FE
 - Locally coordinated CIAG, based on local skills needs analysis and developed through collaboration
 - Personal Learning Accounts piloted with local area partnerships, initially targeted at areas with identified skills shortages; these should allow for individual and employer co-investment.

The RSA's Future Work Centre published [Four futures of work: Consequences for the Scottish skills system](#), developed with Skills Development Scotland (SDS).

- A series of workshops were held with learning providers, employers, policymakers and trade unions to explore how the Scottish skills system can 'harness the opportunities the future of work presents, while mitigating the risks'.
- Four scenarios were proposed by the RSA for 2035:
 - The Big Tech Economy: technologies develop at a rapid pace, delivering significant improvements in the quality of products and public services, and reduced costs for everyday goods, while unemployment and economic insecurity grow.
 - The Precision Economy: technological progress is moderate, but a proliferation of sensors allows firms to create value by capturing and analysing more information; gig economy platforms have more prominence and rating systems become pervasive in the workplace.

- The Empathy Economy: technology advances at pace, but so too does public awareness of its perceived dangers, with tech companies creating new products that work on everyone's terms; disposable income flows into 'empathy sectors' like education, care and entertainment.
- The Exodus Economy: economic slowdown dries up funding for innovation and keeps the UK in a low-skilled, low-productivity, low-paid rut; some workers struggle on poverty wages and others find ways to live more self-sufficiently, including by moving away from urban areas.
- Seven challenges are proposed for consideration in order to future-proof the skills system:
 - Reskill workers at risk of automation
 - Find the teachers of the future
 - Deliver high-quality learning experiences
 - Support economically insecure workers
 - Rethink funding of skills and learning
 - Ensure a responsive skills system
 - Balance demand for technical skills with the need for new mindsets.

The Scottish Council for Development & Industry's Skills & Employability Leadership Group published [Upskilling Scotland: The Future of Skills and the Fourth Industrial Revolution](#) in partnership with SDS.

- The vision is of an inclusive, responsive and world-class learning ecosystem and labour market, empowering a highly skilled workforce to perform at its highest level, driving high levels of productivity, wages, global competitiveness and inclusive and sustainable economic growth.
 - A 'paradigm shift' is required, with a much greater commitment to lifelong learning, for everyone to accelerate reskilling and upskilling across the workforce.
- Three 'key pillars' of a high-performing economy are identified: high-performing individuals, high-performing workplaces and in-work development.
- 34 recommendations are made under ten headings: future and meta-skills; learning ecosystem; innovative, inclusive recruitment; talent pipeline; access to talent and migration policy; skills recognition, supply and demand; leadership and management; fair work; work-based learning; and lifelong learning.
 - Everyone should be given a lifelong entitlement to learning via a dedicated fund.
 - Developing meta-skills in the workforce should be a national priority, embedded in all learning.

The Institute for Public Policy Research (IPPR) published [Shaping the Future: A 21st century skills system for Wales](#).

- To meet the challenges and opportunities that Wales faces, its skills system will need:
 - a clear focus on creating a fairer and stronger economy, helping to manage the effects of automation and ageing; close alignment between skills, enterprise and economic policy; a social partnership approach; a focus on fair work
 - to initiate a lifelong learning revolution
 - more modular, bite-sized learning based on skills as much as qualifications, with flexible provision
 - flexible and responsive curricula to be able to reflect rapid changes in the economy and society
 - to unlock demand for skills among employers and employees, avoiding the risk of a 'low skill equilibrium'
 - the right balance between autonomy and accountability, to give space to skills providers within an overall policy strategy for the whole of the skills system.
- Recommendations include:
 - Replace the school leaving age of 16 with a new 'skills participation age' of 18.
 - Set a target to match some of the highest adult skills participation in the world by 2025.
 - Pilot a new 'master apprentice' programme for older workers to pass on their experience.
 - Pilot an open institute of technology, providing flexible, modular and bite-sized learning online and face-to-face.
 - Reform post-16 curricula to focus on skills and capabilities rather than developing and testing knowledge.

- Pilot in-work 'progression agreements', making public investment contingent on successful completion of learning outcomes by learners and agreed career progression from employers.

The project follows similar work undertaken by IPPR in [Northern Ireland](#) and [Scotland](#).

The Centre for Progressive Policy published [Productivity knocks: Levelling up with social infrastructure investment](#).

- 'Social infrastructure' comprises the systems that enable society to work effectively; the term has increasingly been used to elevate the status of investment in activities previously regarded as 'soft' or intangible.
 - The focus here is on a subset of social infrastructure for which there is evidence of productivity returns comparable to those of physical infrastructure, including skills.
- Despite the evidence, the economic returns are often overlooked for a number of reasons, e.g.: HM Treasury's preference for established economic argument in the spending review process; the cross-departmental nature of social infrastructure projects; short planning timescales in government.
- The UK Government's ambition of 'levelling up' will require an integrated approach to social and economic policy, based on a number of high-level principles including considering the long term, with investment strategy set over a 10–15 year period, and taking a place-based approach rather than departmental budgeting.

The Migration Advisory Committee published [A Points-Based System \[PBS\] and Salary Thresholds for Immigration](#) – its response to the Home Secretary's commission.

- In line with international systems, the recommendations for a PBS – as just one part of a wider system – are focused on highly skilled migrants.
 - The existing framework for Tier 2 (General) should be retained and should remain as an employer-sponsored route with a salary threshold expanded to include medium and highly skilled workers.
 - The current Tier 1 (Exceptional Talent) route does not work well, as the skills bar for entry is too high and too risk averse, resulting in numbers admitted falling far short of the cap; if the Government is to introduce a PBS it should consider modifying this route, based on best practice.
 - There should be a pause to the current planned increases in the settlement income threshold and a review of the requirements, which are far more rigid than in other countries; PBS might have a role to play in a more flexible system.
- In terms of salary threshold, there should be a simplified way of computing the new entrant rate (70% of experienced worker rate) and national pay scales should be used as the relevant thresholds for 24 occupations.
 - Lower thresholds for occupations on the Shortage Occupation List are not recommended, as shortages generally indicate that wages are below market-clearing levels.
 - The Government can address concerns about sectors that primarily employ lower skilled workers via another route, such as a temporary worker route or a sector-based scheme.
 - Despite arguments for and against geographical variations, a single UK-wide salary threshold is recommended to avoid some regions being labelled as 'low wage'.

It also published [annexes](#) to its report and [The fiscal contribution of EU migrants: Update and scenario analysis](#) by Oxford Economics.

The Government subsequently published details of the [new system](#) to be introduced on 1 January 2021.

The Federation of Small Businesses published [A World of Talent – Building an immigration system that works for small businesses](#), examining the implications of the UK's planned PBS.

- A fair, flexible immigration system is vital for the UK's 5.8m small businesses, with many reliant on staff from outside the UK to fill the current skills gaps.
- 26% of UK small firms employ European Economic Area (EEA) workers (excluding those from RoI) (up to 53% in London); 11% employ non-EEA migrants.
 - 41% of UK small businesses mainly employ low-skilled EEA workers, 30% mainly medium-skilled workers, 29% mainly high-skilled workers.
 - 46% employ at least one high-skilled British worker, 55% of those with EEA staff that employ at least one high-skilled worker.
 - 48% can't meet the current Tier 2 visa costs.

- In 2018, 65% of migrant workers in Northern Ireland were from EU26 countries (excluding RoI), compared to the UK average of 40%; around 66% of these were in the manufacturing, hotel and restaurant sectors.

Cedefop published [*Vocational education and training in Europe, 1995–2035: Scenarios for European vocational education and training in the 21st century.*](#)

- The report summarises a number of research papers published as part of the project 'The changing nature and role of VET in Europe (2016–18)', and adds further analysis, modelling and literature.
 - It also presents results from an online survey among VET stakeholders, carried out in spring 2018.
- VET is a broad concept that is understood differently in different countries, and used differently by different international organisations.
 - Cedefop describes VET as 'education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market'.
 - Broadly speaking, VET covers: any curriculum content in school that aims to prepare for the labour market; much of HE; a great deal of formal and non-formal learning undertaken by adults; and any training conducted within firms.
- VET in Europe is highly diverse; national systems reflect events of previous years as well as current concerns, and are in constant flux.
- Many systems have 'come of age' since 1995, developing comprehensive national systems where VET has a clearly defined role in relation to general and academic education.
 - VET is now provided by an increasingly diverse set of institutions, applying a growing variety of learning formats and settings; school-based or apprenticeship-based models are being supplemented and complemented by alternative forms.
 - The number of VET qualifications on offer has steadily dwindled in most countries, refocusing on broader occupational areas, acknowledging that job-specific skills will inevitably change and that the ability to cope with this change is of essential importance.
 - There is a blurring of lines between initial VET and general upper secondary education; programmes that combine general subjects and vocational specialisation have become more common.
 - Notably, we have seen the emergence of VET at L5–8; Germany and Austria levelled their 'master craftsman' qualifications at L6, redefining what is understood as HE.
- Europe as whole, particularly at upper secondary level, has experienced both academic and vocational drift.
 - The share of VET at upper secondary level has decreased in countries where it was high (70%+) in the early and mid-1990s, while it has increased significantly in countries with traditionally low shares in VET.
 - In countries with both school-based and substantial work-based tracks, the apprenticeship track has lost ground to the school-based track; in contrast, apprentice numbers have increased in countries that previously had only minor apprenticeship tracks.
 - There is also a growing number of mixed systems, where work-based and school-based tracks sit alongside each other.
 - In almost all countries there is a trend within school-based VET towards broader vocational domains, a richer mixture of theoretical and general subject matter, and qualifications providing access to HE at the expense of more specific practical VET.
- Three scenarios for 2035 are offered, which provide the basis for more detailed, concrete scenarios:
 - Pluralistic VET – with lifelong learning at the heart and in which the distinctions between vocational and general education become increasingly obsolete
 - Distinctive VET – with occupational and professional competence at its heart; VET clearly differs from general education but dominates the education system, effectively a 'VET hegemony'
 - Special-purpose VET – with job-oriented training at its heart, in which some very specific forms of VET have survived in an education system dominated by general education and HE.

Cedefop published [*Towards new horizons: Shifting realities for vocational education and training – Cedefop activities 2019–20*](#), a briefing note on how it is working with the European

Commission, member states and social partners to help develop and realise the future skills and VET agenda.

- [Skills-OVATE](#) (Skills Online Vacancy Analysis Tool for Europe) uses big data to signal how jobs are changing and which new ones are emerging, providing countries with critical labour market and skills intelligence.
- This spring, Cedefop will release new projections on skills demand and supply in the EU to 2035.
 - It will also assess the data to understand how skills demand and supply are likely to be affected by the EU Green Deal, the increasing use of automation and AI and the ageing population.
- In 2020 it will also published the report of CrowdLearn – the first ever study to investigate the implications of platform working in terms of skill needs, the way they are acquired and matched to jobs, and the impact on conventional VET and lifelong learning.
- Other areas of activity include: linking guidance and validation; an international handbook to help those who need to describe and use learning outcomes; expanding and improving apprenticeships; and promoting key competences in VET.

IZA published [Output Costs of Education and Skill Mismatch](#) for 17 OECD economies based on data from the Survey of Adult Skills (PIAAC).

- Education and skill mismatch refers to workers employed in occupations that typically require different education or skills.
 - In labour statistics policy, workers are classified as over- or underemployed, depending on whether their education or skill is below or above the occupation average requirement.
 - The OECD reports that on average across advanced economies, with respect to their education/skill: 25%/18% of workers are underemployed and 22%/7% are overemployed.
- The study uses a macroeconomic model of mismatch to provide estimates of cost in terms of output.
 - The cost of mismatch is 3% of output on average but varies between -1% and 9% across countries.
 - The key variable is not the percentage of mismatched workers but their wage relative to well-matched workers.
- Output cost of mismatch is positive and sizeable in countries with a large wage cost of underemployment, e.g. in the US, well-matched college graduates earn 90% more than underemployed college-educated workers.
 - This high 'wage cost of underemployment' signals a sizeable scarcity of college-educated workers in skilled jobs and/or that a college degree does not significantly improve the productivity of workers in unskilled occupations – removing mismatch in the example would raise output by 6%.
 - Reducing underemployment increases output in all of the countries, but this gain is related to the wage cost of underemployment.

The OECD published [Strengthening the Governance of Skills Systems: Lessons from six OECD countries](#) – Estonia, Germany, Korea, Norway, Portugal and the US.

- Managing skills policy is inherently complex as it is at the intersection of education, labour market, industrial and other policy domains.
 - Addressing these challenges is more crucial than ever as globalisation, technological progress and demographic change are putting daunting pressures on skills systems to ensure that all members of society are equipped with the skills necessary to thrive in a rapidly changing world.
 - The report presents examples of how countries have responded to one or more of the challenges.
- Policymakers are advised to:
 - establish coordinating committees with a meaningful mandate and clear internal governance structures in order to avoid overlap between the competing mandates of committees and agencies
 - promote the involvement and commitment of non-governmental stakeholders, but pay attention to the risk of undue influence of special interests
 - support the establishment of information management systems, but ensure that they provide usable and relevant information to stakeholders and policymakers
 - invest and commit the diversified resources needed to strengthen skills policies in order to avoid underfunding newly established institutions and governance structures.

A self-assessment tool allows policymakers and stakeholders to evaluate the overall potential of their country and strengthen the governance of its skills policy regime.

The UNESCO International Centre for Technical & Vocational Education & Training [TVET] (UNEVOC) published [Understanding the return on investment from TVET: A practical guide](#).

- The guide aims to:
 - identify the main issues and key elements to measure the return on investment
 - present a framework that encompasses different stakeholder groups and identifies key return on investment indicators
 - provide fundamental guidelines and tools for return on investment planning and data collection.
- The guide also emphasises the importance of ensuring that the foundation of return on investment should be closely aligned to the objectives of the TVET system of a country.

ADULT & LIFELONG LEARNING

Nesta published [Education for all: Making the case for a fairer adult learning system](#), supported by Google.

- Since the information and telecoms revolution, the service sector share of total employment has increased significantly, and the direct production of goods has been replaced by the production of knowledge-based and in-person services.
 - This structural transformation has led to a marked concentration of economic activity in particular regions, worsening regional inequalities and the increasing importance of lifelong learning.
- In 2018, adult participation in learning in the UK was 14.6%, only 50% of the rate in Sweden (29.2%) and Finland (28.5%).
- There are large regional disparities in adult learning within the UK.
 - The south west of England and London reported participation levels of about 16%, compared to around 10% in Northern Ireland.
 - The development of effective regional adult learning systems is critical, as some local factors – relating to location, the local economy and prevailing community cultures – are not easily addressed by central government.
- There are major disparities between different social and economic groups, with non-participants falling into one or more of three groups: the elderly, those with low levels of education and the unemployed.
 - In the European Commission's Adult Education Survey (2016) the 25–34 participation rate was 60.3% compared to 39% for 55–64 year-olds.
 - It was 68.1% for adults with tertiary-level education compared to 28.1% for those less qualified.
- Participation in adult education and training is mostly non-formal, job-related and employer-sponsored.
 - However, the training efforts of many employers remain focused on young and highly skilled employees, increasing existing inequalities across individuals.

Nesta published [Make it FutureFit: Four ways to design better adult learning](#), on how learning can better prepare adults for the immediate needs of a rapidly changing world of work.

- The report offers advice and case studies on strategies that:
 - promote learner identity, e.g. by making patterns of study reflect patterns of work
 - drive motivation to learn, e.g. by making objectives personalised
 - help learners master a new skill or topic, e.g. by letting learners pace themselves
 - develop a community of practice, e.g. by making group members accountable for each other's learning.

Demos published [The Learning Curve: How the UK is harnessing the potential of online learning](#), based on research supported by Google, including a poll of the online learning habits of 20,000 people.

- Online learning encompasses the full range of informal to formal learning, and is defined as:
 - reliant on the internet, either in transactional (e.g. downloading a PDF) or participatory fashion

- improving skills for wellbeing, personal, educational or economic purposes.
- Among the findings:
 - 66% of the UK workforce use online learning to help with work; search engines and video platforms are the main source of knowledge.
 - 68% of 18–24 year-olds learn new things online at least once a week, falling to 57% of those aged 60+.
 - 58% learning online do so on their own initiative; only 18% say their employer suggested/required it.
 - 22% say they have created learning materials for others, rising to 48% among 18–24 year-olds.
 - 77% of people who learn online say it is beneficial to their mental health.
 - 33% have used it to help them get a new job, 29% to help increase their pay.
 - 67% of those who use the internet to learn new things for work say that doing so has helped them do their job more efficiently.
- 72% of those learning online are doing so for free, therefore:
 - there is a clear benefit to employers to encourage, recognise and reward this proactive approach to more productive working
 - the Government should consider giving certain employees the right to five days of paid learning leave
 - the Government and industry should establish joint working groups to set up new accreditation bodies for sectors that don't already have them, particularly in lower pay industries
 - universities and professional bodies should consult on 'open access exams'.

Cedefop published [Empowering adults through upskilling and reskilling pathways – Volume 1: adult population with potential for upskilling and reskilling.](#)

- Empowering low-skilled 25–64 year-olds through upskilling and/or reskilling is associated with large social and economic incentives.
 - Upskilling the EU-28 adult population would lead to an estimated average yearly gain of €200b between 2015 and 2025.
 - However, the low-skilled adult population is heterogeneous and includes adults with different needs and characteristics.
- The report presents data on: educational attainment; computer and digital skills; numeracy and literacy; adults with medium or high education but working in elementary occupations (a proxy for skills obsolescence/skill loss).
- In the EU-28+, 46.1% of the adult population (128m) has potential for upskilling and reskilling – a far higher figure than the 60m low-educated adults usually identified as 'low-skilled'.
 - The figure for the UK is 46.9%, comprising: 23% low-educated; 3.6% medium–high-educated in elementary occupations; 8.8% low digital skills but high-educated; 11.5% low cognitive skills but high-educated.
- The risk of low skills increases with age and is higher for inactive and unemployed adults compared to the employed.
 - The subgroups with the most potential for upskilling are unemployed and inactive people aged 55–64, followed by inactive people aged 35–54.

THE CHANGING NATURE OF WORK

WEF published [The Promise of Platform Work: Understanding the Ecosystem](#), mapping the different categories of digital work/service platform.

- The rapid growth in companies operating digital platforms for individuals to hire out their skills and services has disrupted a range of sectors.
 - They offer numerous benefits to workers and clients, but also pose challenges for working standards and regulators.
- Such platforms are distinct from the broader 'gig economy' and from platforms that solely enable the sharing of assets (e.g. Airbnb) or selling of goods (e.g. eBay).

- Many platforms remain loss-making, and it is not yet clear what sustainable business models will look like; however, they could play a growing role in the new economy as the distinctions between the platform economy and traditional staffing models potentially erode.
- Around 0.5–2.0% of the OECD workforce is engaged in platform work, but numbers are growing rapidly, with four categories identifiable:
 - Free agents (working in it by choice) 30%
 - Casual earners (supplementing main income) 40%
 - Provisionals (would prefer a traditional job) 14%
 - Financially strapped (doing it only to make ends meet) 16%.
- Although leading platform companies are headquartered in major advanced economies, the workforce is widely distributed (e.g. Upwork has 12m freelancers registered in over 180 countries), posing challenges for regulation but also opportunities for sharing good practice.
- Benefits for workers include: flexibility; geographic diversity; greater demand; inclusivity; improved matching; reliable payment.
- Challenges for workers include: pay levels; benefits and social protections; security; upskilling; dignity; representation; balance of power.
- Platforms can be placed within four broad categories based on task complexity and geographic scope:
 - Location-based staffing (high complexity/location-bound)
 - Online freelancing (high complexity/global reach)
 - Location-based services (low complexity/location-bound)
 - Online micro-tasking (low complexity/global reach).

As part of its Promise of Platform Work project, the WEF's Platform for Shaping the Future of the New Economy & Society also published [Charter of Principles for Good Platform Work](#).

The European Commission published [Study to gather evidence on the working conditions of platform workers: Final report](#), providing an overview of the variety of policy responses in EU countries to the challenges faced.

CESifo published [Smart-Working: Work Flexibility without Constraints](#), reporting on a randomised experiment on a sample of workers in a large Italian company.

- An average of 75% of European employers have access to some work flexibility, while in the US a recent survey found 47% had it, but 96% wanted it.
 - A 2017 Gallup report based on interviews with more than 195,600 employees found that flexibility played a major role in decisions to take or leave a job.
 - The COVID-19 outbreak has resulted in wide use of smart working, forcing organisations to adopt models based on results rather than workplace presence and work during particular hours.
- In this research, workers were randomly divided into a group that worked flexibly in terms of space and time – ‘smart working’ – one day per week for nine months, and a control group that continued to work traditionally.
- There was a causal link between the introduction of smart working and several economic outcomes that capture workers’ productivity, wellbeing and work–life balance; the results were stronger for women.
- The three sets of outcomes together suggest interesting insights:
 - Smart workers claim to be more satisfied with their free time and social life; they are also more satisfied with their incomes, suggesting there is no negative effect of smart-work on earnings.
 - The observed increase in productivity means that, for the same pay, smart workers put more effort into their jobs than non-smart workers – they are more focused and more active; this may be the result of different and more effective organisation of their time, including a reduction of commuting time and a better use of time within the household.
 - The fact that job satisfaction increases even if workers apply more effort means that smart workers have a positive perception of the new form of work organisation – they are ready to exchange more effort for more flexibility to maintain or increase their job satisfaction.

IZA published [Gender Differences in Preferences for Meaning at Work](#), an exploration of differences aiming to better understand occupational segregation by gender.

- A survey covering 110k individuals in 47 countries was used to demonstrate the universality of gender differences in preferences for meaning at work.
 - While both genders value meaning derived from 'job design', gender differences in preferences for meaning induced by job mission were found to be large and universal.
 - The differences become more pronounced with greater levels of education and economic development, suggesting that their importance is likely to increase over time.
- The behaviour of a cohort of MBA students at a top US university was also studied over two years.
 - Preferences, particularly for meaning induced by job mission, were seen to explain gender differences not only in the types of courses taken, but also in industry placements during and after the MBA; this helps to explain the under-representation of females in higher paying industries.
- The study demonstrated that men and women differ in their preferences for meaning at work, and in particular meaning at work derived from job mission as opposed to job design.
 - This has implications for understanding the drivers of occupational segregation and the consequences of corporate mission and purpose.
 - The addition of meaning-inducing job attributes such as corporate social responsibility to companies in high-paying industries could increase the representation of women in these occupations and thereby narrow the gender wage gap.

EMPLOYMENT: RIGHTS, RESPONSIBILITIES & WAGES

The Chartered Institute of Personnel & Development (CIPD) published its 20th [Health and Well-being at Work](#) survey, based on responses from over 1,000 UK professionals representing 4.5m employees.

- 44% of organisations have a standalone wellbeing strategy in support of their wider organisational strategy (+4ppt on 2019).
- 61% believe that employee wellbeing is on senior leaders' agendas (no change), but 58% report that line managers have bought into the importance of wellbeing (+7ppt).
- More organisations are trying to take a holistic approach to health and wellbeing, but financial wellbeing is still being neglected by most.
- 37% have seen an increase in stress-related absence, while 60% report an increase in common mental health conditions; the top two causes of stress are heavy workloads and management style.
 - 33% of those who report an increase in stress-related absence say their organisation isn't doing anything to address it.
- 89% have observed 'presenteeism' in their organisation, over 25% of whom report an increase; 73% have observed some form of 'leavism' (e.g. working while on annual leave); just under 33% of organisations are taking steps to address these concerns.
- 42% believe that technology has an overall positive impact on wellbeing, including through enabling flexible working and more effective communication.
 - 30% believe technology has an overall negative impact, including due to the inability to switch off outside work and the stress resulting from technology failure.

Separate summaries are available for the public and private sectors at the same link.

The UCL IOE, Carnegie UK Trust and Operation Black Vote published [Race Inequality in the Workforce: Exploring the connections between work, ethnicity and mental health](#).

- The report compares the employment status of 7,700 25 year-olds from different ethnic backgrounds living in England, as well as examining the mental health of people in different types of employment.
- Compared with their White peers, BAME 25 year-olds are: 58% more likely to be unemployed; 47% more likely to be on a zero-hours contract; 10% more likely to be working a second job; 5% more likely to be doing shift work; 4% less likely to have a permanent contract.
- However, experiences in the job market vary: e.g. Pakistani 25 year-olds are more likely to be on a zero-hours contract or be working shifts and less likely to have a permanent job than their White peers, while there is no such difference for Indian and black Caribbean workers.

- There are significant links between employment status and mental health, but there is no additional advantage or disadvantage in terms of reported mental health for ethnic minority 25 year-olds in precarious work compared to White adults in precarious work.
- Indian, Pakistani, Bangladeshi and black African ethnic groups are less likely to report having mental ill health symptoms compared to the White group, even after taking into account socioeconomic status, gender and educational attainment.
 - Those who report symptoms of mental ill health at age 14 or 16 are more likely to report mental ill health at age 25.

Eurofound published [Working conditions: Gender equality at work](#), based on data from its European Working Conditions Survey.

- The report examines women's and men's working conditions, working-time patterns, work-life balance and workers' health.
- Gender inequality at work persists across Europe; European and national strategies aimed at achieving job quality for all, which seek to mainstream gender equality, could help address persistent inequalities between men and women.
- Key findings include:
 - Men are more likely to work in more demanding physical environments and have relatively worse working-time quality than women, but more likely to receive better pay.
 - Men report higher levels of quantitative demands (e.g. working to tight deadlines), while women report higher levels of emotional demands (e.g. handling angry clients, patients or pupils).
 - Men tend to receive less support from colleagues and managers, while women are much more likely to be exposed to adverse social behaviours (e.g. verbal abuse or harassment).
 - Access to training is more limited among lower skilled occupations, within which jobs women have even less access to it.
 - Variable forms of pay (e.g. company shares or payments based on company performance) are becoming more common and are increasing more rapidly among men than women, widening the gender pay gap further.
 - Mixed occupations – the most gender balanced – not only differ from male- and female-dominated jobs but also show better job quality in most, if not all, dimensions, and display the smallest differences between men and women.

CIPD published [Managing conflict in the modern workplace](#), drawing on surveys and focus groups.

- 78% of employers rate the working environment and culture in their organisation as 'good' or 'very good'.
- 89% of employees would describe relationships with team colleagues as good/very good; 86% would say the same for wider work colleagues.
 - 73% say that their colleagues treat other colleagues with dignity and respect; 9% disagree.
- 16% would disagree with the statement that 'no one in my team would deliberately act in a way that undermines my efforts' (63% agree).
 - 20% agree that 'people in my team sometimes reject others for being different'; 24% think challenging issues such as bullying and harassment are swept under the carpet.
- 26% of employees and 20% of employers say that conflict at work is a common occurrence; 35% of employees had experienced some form of interpersonal conflict at work over the last year.
 - 31% of the employees who had experienced conflict said the person they reported it to didn't take the conflict seriously; 48% felt the other party's interests took precedence.
- 32% of employees who had experienced conflict said their manager had made the situation worse.
 - Only 40% of managers said they had been given training in people management skills.

L&W published [The future of the minimum wage: The worker perspective](#).

- The National Minimum Wage (NMW) came into force in April 1999 – the first time government had set an economy-wide wage floor in the UK.
 - The NMW is one of the most successful policies in recent decades and has achieved a deep and lasting political consensus.

- Its introduction has helped to almost eliminate extreme low pay, and recent increases have boosted hourly pay for those with the lowest incomes without having a significant negative impact on employment.
- There is strong and broadly based support for further increases in the NMW: 66% of adults believe that it is too low and should be increased, with particularly strong support among low-income households, young people, renters and 2017 Labour voters.
- 66% of adults back the Government's commitment to increasing the wage floor to £10.50 by 2024 for all workers aged 21+.
 - 52% would support more radical action, with an immediate increase to £10/hr.
 - 51% support having a single NMW irrespective of age, rather than having lower rates for younger workers.
- However, while low-paid workers are very supportive of such an increase, many are sceptical about the impact this would have on their financial situation and how employers would respond.
 - Any increases in pay might be off-set by a decline in in-work benefits, and employers might respond to a higher wage floor through measures that will compromise other aspects of good work.
 - When it comes to the potential trade-offs, more adults tend to favour a cautious approach that minimises any risk of increased unemployment.
- When it comes to regional flexibility, 52% prefer to maintain a single NMW, while 37% think that nations and regions should be able to set their own, higher NMW.
 - London is the only region where a majority support local flexibility (53%).

There are no separate data for Northern Ireland. The fieldwork was carried out before the COVID-19 outbreak in the UK, which will have a significant impact on the UK economy.

IZA published [Minimum Wage Non-Compliance: Evidence from Ireland](#), based on data from the Irish Labour Force Survey for the RoI.

- 5.6% of minimum wage workers are paid below the minimum wage for reasons other than those permitted under legislation; this is considerably lower than estimates reported in literature.
- Compared to legally compliant minimum wage workers, non-compliant workers are more likely to:
 - be male, Irish, aged over 35, on temporary contracts and work on their own
 - work in the domestic personnel sector, and in childcare, personal care or agricultural occupations.

The LSE Centre for Analysis of Social Exclusion (CASE) published [The National Living Wage \[NLW\] and falling earnings inequality](#), examining changes in UK wages before and after the introduction of the NLW.

- The NLW was introduced in April 2016, replacing the NMW for those aged 25+.
- The Low Pay Commission (LPC) was tasked with making recommendations for future increases in line with achieving 60% of the median wage by 2020.
 - The LPC had to recommend levels that would help as many low-paid workers as possible without adversely affecting employment or the economy.
- Key findings:
 - Inequality in weekly and hourly earnings has fallen since the introduction of the NLW; this is the first rapid fall since at least the late 1970s.
 - The replacement of the NMW with the more generous NLW has led to a compression in the lower half of the wage and weekly earnings distributions.
 - The NLW now touches the tenth percentile of the wage distribution for all employees (which includes lower paid part-time employees); the gap between the minimum wage rate and the tenth percentile of the wage distribution for full-time employees has narrowed markedly.
- Implications for policy and practice include:
 - Set high enough, with sufficient 'bite', minimum wages can be effective at reducing wage and earnings inequality; without a minimum wage, market-set wages result in low-paid workers being paid even lower rates.
 - Increases in low-paid wages to rates approaching 60% of median pay can be achieved without substantial loss of employment.

- Although increases in minimum wages have raised the earnings of many low-paid workers and reduced earnings inequality, income inequality remains high and in-work poverty rates have increased, highlighting the complex relationship between wages, household incomes and poverty.

International Comparisons

The European Commission published [Mobility Scoreboard: Higher Education Background Report – 2018/19](#), the second edition of a Eurydice report covering the 27 EU member states and the UK.

- The Mobility Scoreboard provides a framework for monitoring progress made by European countries in promoting and removing obstacles to learning mobility, covering HE and IVET.
- The report provides information for six composite indicators on: information and guidance; foreign language preparation; portability of grants and loans; participation of disadvantaged learners; recognition of learning outcomes; and the automatic recognition of qualifications.
- Findings include:
 - While progress has been made in several areas, top-level authorities could make better use of common EU legal instruments, tools and agreements – e.g. qualifications frameworks – to improve transparency and develop trust between education systems.
 - Monitoring (e.g. of personalised information and guidance services, participation of disadvantaged learners in learning mobility, or HEIs' recognition practices) is often lacking; improved monitoring could provide valuable information to tackle learning mobility obstacles.

Cedefop released the [2020 European skills index \(ESI\)](#), which showcases improvements in skills systems since the 2018 edition, covering the EU-27, the UK, Iceland, Norway and Switzerland.

- The ESI is a composite indicator measuring countries' distance to an 'ideal' based on the highest achieved performance by any country over a period of seven years.
 - It comprises three pillars: skills development, skills activation and skills matching.
 - 15 indicators are collated from various international datasets, the scores are calculated and then averaged, and an index score is formed; a score of 65 suggests 65% of the ideal performance.
- The UK's overall score is 53: development 51 (21st); activation 76 (12th); matching 41 (5th from last).
 - The Czech Republic scores 77, highest overall: development 64 (10th); activation 74 (13th); matching 91 (1st).

Cedefop published [On the way to 2020: Data for vocational education and training policies – Indicator overviews 2019 update](#), collating and updating statistical evidence from the main international data sources for VET and lifelong learning in European countries.

- 36 internationally comparable indicators are used, focusing on skill development through initial and continuing VET, adult education and training, and the broader education and labour market context.
- The data have been organised in three main domains:
 - Access, attractiveness and flexibility (e.g. IVET students as a percentage of all upper secondary students)
 - Skill development and labour market relevance (e.g. IVET public expenditure per student)
 - Overall transition and employment trends (e.g. workers with skills matched to their duties).

ESRI published [Educational expansion and overeducation of young graduates: A comparative analysis of 30 European countries](#) in the *Oxford Review of Education*, based on EU Labour Force Survey data 2000–2016. *[Login is required to access the full article.]*

- The relationship is examined between changes in the composition of educational attainment and overeducation rates among new job market entrants with post-secondary and tertiary qualifications.
- Throughout the period investigated, tertiary education expanded rapidly while the proportion of young people with lower levels of education fell gradually.
- Despite significant increases in the percentage of young people educated to tertiary level, over-education among new tertiary graduates fell.

- Some of the greatest declines in overeducation occurred in countries experiencing the most significant expansion in tertiary education.
- Overeducation rates among young graduates with upper secondary and post-secondary (non-tertiary) education were lower than overeducation of tertiary graduates, and declined slightly over the period.
- Results highlight a number of factors potentially explaining cross-country variation.

The Economist Intelligence Unit published [Worldwide Educating for the Future Index \[WEFFI\] 2018: Building tomorrow's global citizens.](#)

- WEFFI was first commissioned by the Yidan Prize Foundation in 2017; it assesses the effectiveness of 50 education systems in preparing 15–24 year-olds for work and life in a rapidly changing landscape.
 - It scores economies on three indices: policy environment; teaching environment; and socioeconomic environment, and draws on insights from 17 global experts on education.
- The UK (74.1) is 10th overall, just behind France (74.2) and ahead of Australia (74.0).
 - Finland (80.9) is first overall, followed closely by Switzerland (80.3) and New Zealand (79.3).
- Findings include:
 - Wealth is not all-important: there are overachievers among lower income economies, such as Ghana (52.9 – 25th), Mexico (58.8 – 19th), Colombia (57.4 – 20th), Costa Rica (57.3 – 21st) and the Philippines (52.2 – 28th); there are also *underachievers* such as Norway (65.0 – 14th), the US (58.9 – 18th), and Israel and Spain (55.0 – joint 23rd).
 - Future-skills strategy, curriculum and assessment frameworks should be reviewed periodically to keep pace with workforce and societal change; some high-income economies haven't reviewed curriculum and assessment frameworks in the past three years.
 - Teachers must engage in continuous learning, updating their teaching methods; only nine of the economies currently require in-service training that includes future-skills training.
 - Diversity and tolerance should be instilled as universal values, and should be reflected in the classroom and in extra-curricular activities.
 - Rigid, exam-based approaches don't suit future-skills learning.

UNESCO launched [Education Progress](#), a new online interactive tool to complement its [Global Education Monitoring \[GEM\] Reports](#).

- The GEM Report monitors progress towards the education targets in the SDGs framework, SDG 4.
- The new tool presents data by country, region or income group, and policy priorities to 2030 in access, equity, learning, quality and finance.

Government

NORTHERN IRELAND

The DfE published [Evaluation of Success through Skills – Transforming Futures](#), evaluating Northern Ireland's current ten-year Skills Strategy in order to inform the next one, due to be launched in December 2020.

- 17 actions across five themes were undertaken to achieve the four strategic goals.
 - All were actioned, at least initially; however, it was unclear how the stated actions alone would lead to the required scale of upskilling.
- Stakeholders generally felt the strategy was well aligned to government priorities and that its implementation was ambitious.
- Stakeholders felt the same vision was still applicable, but needed to: be realistic; encompass inclusive growth; move to appropriate skills (e.g. vocational routes); reinvigorate leadership and management programmes; and address STEM imbalances.
 - Most stakeholders felt there had been a lasting impact, notably through the introduction of Higher Level Apprenticeships, the Assured Skills programme and the Skills Barometer; skills have improved, and there is also more awareness around STEM.

- There is scope for more improvement in: how skills impact on productivity and how to measure this; re-engaging the economically inactive; reducing STEM imbalances; improving perception of FE; and investing in key economic sectors.
- In terms of the four strategic goals for 2020:
 - An increase in employed people with L2+ skills from 71.2% to 84–90% is unlikely to be achieved (actual 80.7%).
 - An increase in employed people with L3+ skills from 55.5% to 68–76% could be achieved assuming previous trends continue (actual 66.8%).
 - An increase in employed people with L4–8 skills from 33.0% to 44–52% has been met (actual 44.8%).
 - An increase in Northern Ireland HE graduates/post-graduates in specific STEM subjects from 18% to 25–30% will be achieved (last year 23.2%).
- In terms of its approach, the Skills Strategy was evidence based, said what it would do to meet its vision and, at the time, linked well into the wider government agenda.
 - However, it was largely perceived as a departmental document and did not appear to have full buy-in from other government departments.

The report makes a number of recommendations for the next Skills Strategy.

The DfE published six sub-regional Skills Barometer reports, using the same methodology as that developed in the [Northern Ireland Skills Barometer 2019](#).

- The research was produced by the UUEPC, led by Invest NI; the reports cover:
 - [Belfast City Council](#)
 - [North](#) (Derry City and Strabane, Causeway Coast and Glens)
 - [South](#) (Armagh City, Banbridge and Craigavon, Newry, Mourne and Down)
 - [East](#) (Mid and East Antrim, Antrim and Newtownabbey, Lisburn and Castlereagh, Ards and North Down)
 - [West](#) (Fermanagh and Omagh, Mid Ulster)
 - [Growth Region](#) (Fermanagh and Omagh, Mid Ulster, Armagh, Banbridge and Craigavon).

ENGLAND

The OfS published [Transforming opportunity in higher education: An analysis of 2020–21 to 2024–25 access and participation plans](#), submitted by 171 HE providers wanting to charge the higher fee limit for tuition.

- If all providers meet relevant targets:
 - the gap between the most and least represented groups at high-tariff providers will move from a relatively persistent gap of 6.24:1 in 2017/18 to 3.72:1 in 2024/25; by 2038, the ratio will be much closer to 1:1
 - the continuation gap between the most and least represented groups will reduce from 4.6ppt in 2016/17 to 2.9ppt by 2024/25
 - the gap in degree award outcomes between black and white students will reduce from 22.0ppt to 11.2ppt
 - the gap in degree award outcomes between disabled and non-disabled students will reduce from 2.8ppt to 1.0ppt.
- Providers appear to be taking a more holistic, strategic approach to access and participation.
 - Most describe how their strategy aligns with their learning, teaching and assessment policies, and many have committed to undertaking reviews of these and other policies.
 - A number have committed to expanding existing outreach programmes.
 - Others are undertaking curriculum redesign (often involving students), reforming their pedagogical approaches and developing employability strategies.
- Effective evaluation remains a challenge for many, and a number have committed to building and improving their capacity to undertake robust evaluation over the next five years, using OfS tools.

- Most providers have identified how they will work collaboratively through local Uni Connect partnerships (formerly the National Collaborative Outreach Programme).
 - Providers have also consulted students on their plans, and a number have detailed plans to involve students in further design, delivery, monitoring and evaluation.
- Providers may not yet be adequately addressing the needs of mature students – whose numbers are in decline – and a number of under-represented groups, such as care leavers.

Research England published [Knowledge Exchange Framework \[KEF\] Decisions for the first iteration](#), details of how it will implement the new KEF in 2019/20.

- The KEF is taking a metrics-led approach, although it also includes a narrative component to provide supporting information.
 - All proposed KEF metrics use existing data sources that are already collected via existing statutory returns or other means in order to minimise the burden of the exercise.
- Metrics will be grouped under seven ‘perspectives’ covering a broad range of KE activities: research partnerships; working with business; working with the public and third sector; skills, enterprise and entrepreneurship; local growth and regeneration; intellectual property and commercialisation; and public and community engagement.
- Institutions will be clustered by research specialism (e.g. STEM, arts).
- The results of this first KEF exercise will be published in the summer on an online visualisation platform consisting of a set of interactive dashboards.

The KEF currently only applies to institutions in England, but HEIs in Northern Ireland, Scotland and Wales were invited to contribute to the consultation.

SCOTLAND

The Scottish Government published [Scotland’s Careers Strategy: Moving Forward](#), on lifelong CIAG services and their role in helping to address future skills demands and deliver inclusive growth.

- CIAG services are delivered nationally by SDS with various partners in a range of settings.
- The vision is for a world-class, professionally-led, aligned, flexible service for every citizen.
- There is a need for: a clear articulation of a universal entitlement; comprehensive and joined-up coverage ensuring no one is left behind; consistently high quality practice; strong support for those in greatest need; focus on career management skills; and highly visible and accessible services.
- Coordinating the approach includes: data sharing and usage; alignment in services including digital technology; and stronger links and referral into and across the careers system.
- Overarching aims and principles include:
 - A national model for CIAG services adopted across education, training and employability services for young people and adults.
 - A focus on strengthening partnerships and working more closely with target groups to co-create more CIAG.
 - Sharing knowledge and expertise in professional development for the CIAG workforce, quality assurance and improved outcomes.
 - A pan-sectoral leadership body focused on all-age provision and continuous improvement.

An implementation plan and delivery timetable are expected to be published by the end of 2020.

The Scottish Government published [Employer Perspectives Survey \[EPS\] 2019](#) based on interviews with 2,652 employers in Scotland – the first EPS specific to Scotland.

- 48% of employers had at least one vacancy in the last 12 months, 43% had recruited staff.
 - 51% who had a vacancy collected information to monitor the diversity of applicants.
 - 82% of those with a vacancy could not identify any specific action taken to attract and encourage a diverse range of applicants.
- 30% had recruited an education leaver in the last two to three years; 20% from school, 12% from college, 11% from university.

- 62% say work experience is significant/critical, 51% maths and English to at least Scottish Credit & Qualifications Framework (SCQF) level 4/5, 46% vocational qualifications and 35% particular academic qualifications.
 - 36% had hosted a work placement, 20% for school students; 15% offered work inspiration activities.
 - The main barriers for not offering work placements were structural (68%), having no suitable roles (38%) or a lack of time and resources (20%).
- 58% found that the majority of school leavers were well/very well prepared for work, 74% of college leavers and 78% of university leavers.
- 70% had offered training to staff during the year.
 - 31% had arranged/funded training leading to a recognised vocational qualification.
 - 60% provide internal training, 49% external training.
 - 65% use private training providers, 19% use public providers, e.g. colleges or universities.
- 16% offered apprenticeships; 90% of these offered them to those aged under 25.

A UK-wide EPS was conducted biennially from 2010 to 2016; the final [report](#) was published in June 2017.

Audit Scotland published [Student Loans](#), a briefing paper highlighting aspects of student loan arrangements, including growing costs and debt levels.

- Loans have been provided to 654k individuals; the total loan debt at the end of 2018/19 was £5.5b, and £7m of loans were written off in 2018/19.
- The Scottish Government is asked to consider whether the costs associated with providing student loans are financially sustainable.

WALES

[No relevant material sourced for this quarter's release.]

REPUBLIC OF IRELAND (RoI)

[No relevant material sourced for this quarter's release.]

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