

What do employers want from today's graduates?

Insights from the 2022 QS Global Employer Survey

Published in August 2022



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This year, the QS Global Employer Survey received **26,742 respondents**

Introduction

Over the last two years, the workplace has undergone a dramatic evolution. While remote working began as a necessity during the most uncertain period of the coronavirus pandemic, many businesses have now adopted this way of working on a more permanent basis – recognising its positive impact on staff wellbeing and productivity. According to February 2022 figures from the <u>Office for National</u> <u>Statistics</u> (ONS), "more than 8 in 10 [UK] workers who had to work from home during the coronavirus pandemic said they planned to hybrid work".

A similar shift can be seen around the globe. While some US employers, such as **Google**, have requested a return to the office, this is often part of a hybrid model – unable to ignore the value of working at home. Speaking to **CNBC Work** in April 2022 on the return of the pre-pandemic nine-to-five office culture, CEO of Slack, Stewart Butterfield, said that he simply "can't see that ever occurring."

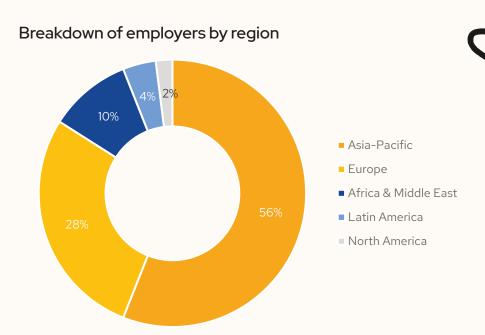


It is not only the coronavirus pandemic changing the way we work. According to a **recent study by Gartner**, the number of businesses using artificial intelligence grew by 270% across four years (2015-2019). Employers are rapidly having to learn new skills in order to work alongside this advancing technology, with the hope that it ultimately makes for more impactful and efficient working. **Studies show that**, while there is still a long way to go in terms of accessing the full potential of AI within businesses and organisations, it is already beginning to contribute towards economic growth across all businesses.

Naturally, with more and more businesses utilising advancing technologies, and with the working day taking on an entirely different form, the skills required of employers are shifting in response. With one of the many functions of a university being to support students to become employment-ready graduates, keeping abreast of employer demands is critical to their success.

Each year, QS researchers conduct the QS Global Employer Survey – communicating with employers across the globe to gain greater understanding of the expectations of graduate skills and experience, and to identify emerging trends that may impact the graduate employment market. This year, the QS Global Employer Survey received 26,742 respondents - a global representation of employers from a range of industries and organisations.

The breakdown of respondents are as follows:



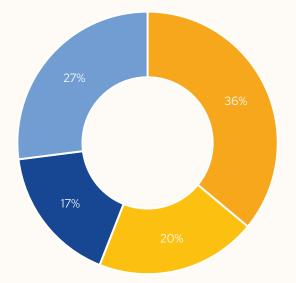
Breakdown of employers by industry

Telecommunications Health & Medica Gas õ **O**

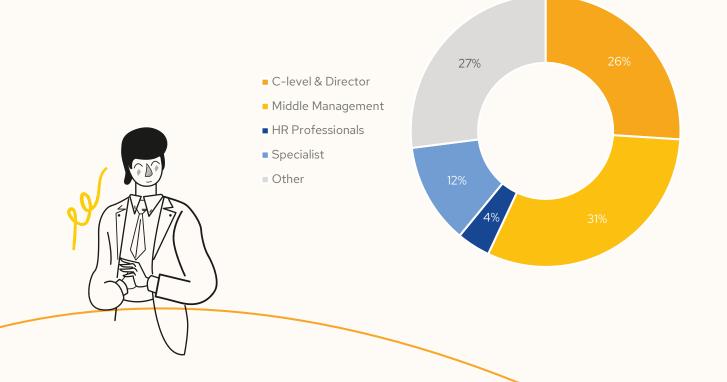




Breakdown of employers by organisation size



- Small business (1-100 employees)
- Medium sized business (100-499 employees)
- Mid-Large sized business (500-2499 employees)
- Large Enterprise (2500+ employees)



Breakdown of employers by seniority level

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Machine Learning: How UK universities are improving quality and conversion rates

Want to know more about the benefits of incorporating machine learning into your recruitment and conversion strategy?

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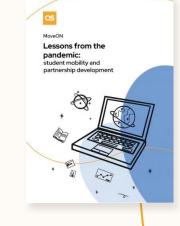
- What machine learning is and how it works
- How adopting machine learning will improve your recruitment success
- What our UK university partners say about machine learning models

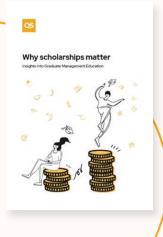
Lessons from the pandemic: student mobility and partnership development

During the height of the pandemic, everything moved online in one way or another: from international conferences to student recruitment efforts. This report reflects on what the sector has learned from the past two years about internationalisation and what can be achieved virtually.

Key questions explored in the report:

- How much will we revert to internationalisation as we knew it before March 2020?
- Was the growth of virtual mobility simply a necessary alternative while other options were limited or is it now what students want and expect?





Why Scholarships Matter: Insights into Graduate Management Education

Gain insights into how business schools around the world are managing and promoting their scholarship provision. Read the results and analysis of our latest Admissions Survey, accompanied by insights from leaders and experts in graduate management education.

The report answers these questions:

- Are business schools offering more scholarships?
- Which type of scholarships are schools prioritising?
- · How openly are scholarships advertised to students?

Section 1: Skills and experience

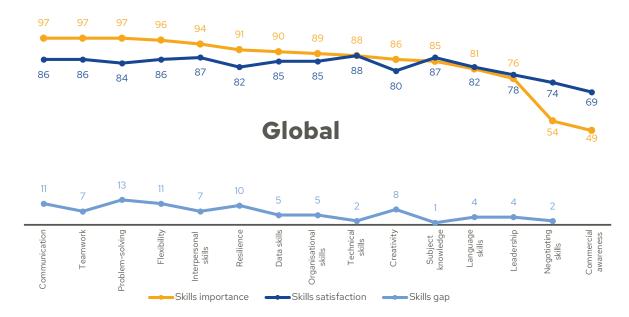
What are employers looking for in today's graduates?

While preparing graduates for employment is not the only function of higher education, it cannot be ignored as being a key motivator in why many students attend university. In fact, the employability rating of a university is regarded so highly among students that QS produces the **Graduate Employability Rankings** to provide clarity to the sector on a range of employment indicators, including the availability of networking opportunities, graduate employment rate and employer reputation.

When prospective international students were queried on the most important measures of graduate outcomes (survey conducted January - March 2022), graduate employment rate came out on top – with 56% of respondents selecting this option. With graduate employment rate being the proportion of graduates in full or part time employment within 12 months of graduation, it is a direct indication of whether candidates are meeting employer needs. It's clear that students consider whether their chosen institution will provide them with the experience and skills necessary to begin the journey down their chosen career path. In this section, we explore the skills considered to be the most important among employers and how satisfied these employers are with the possession and delivery of these skills among recent graduate hires. It is from these figures that the skills-gap indicator was calculated – a ratio of skill importance to satisfaction. This section will also touch on the education experience of employers in these industries.

The skills-gap indicator gives universities an idea of which skills require particular attention in order to suitably prepare graduates for employment and meet employer needs. For example, a large skills gaps can indicate that employers would like to see more graduate hires equipped with this skill, a smaller skills gaps may indicate that employers' needs (whether big or small in this area) are being met.

This data is valuable to university stakeholders involved in preparing graduates for employment – not only careers advisers but the staff involved in shaping learning pathways. To ensure these insights can be used effectively by all, the following section will provide a regional and industry breakdown.



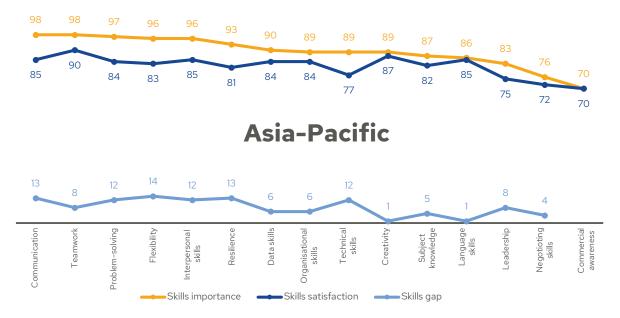
A regional breakdown

A **global** snapshot reveals the skills that employers deem to be important in new graduate hires to be communication, teamwork, problem-solving and flexibility. This is unsurprising given these skills are critical to creating an efficient and positive working dynamic among teams, but may be particularly beneficial skills in the new working environment that many businesses are currently adopting – mainly remote, hybrid working, with more flexible hours. Without regular, in-person interaction within rigid working hours, employees are not only having to be much more self-sufficient, but are having to establish connections with colleagues entirely online.

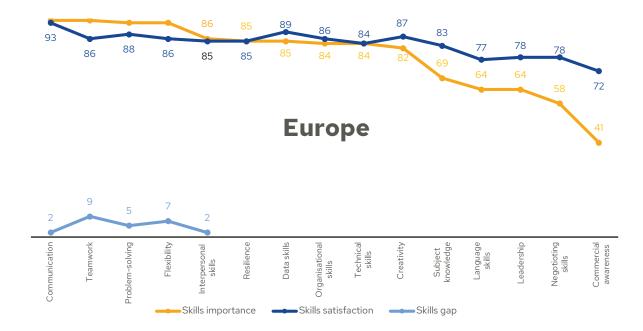
Of the skills deemed to be the most important among global employers, problem-solving stands out for receiving the highest dissatisfaction level and, in turn, the largest skill gap among global employers (skill gap figures for global breakdown are weighted). In an effort to address this particular skill gaps, an increasing number of universities are beginning to adopt emerging teaching methods that encourage greater practice of critical discussion and problem solving, including the 'flipped classroom' method.

Overall, there is a strong degree of satisfaction among global employers towards the skills that new graduate hires possess, particularly regarding technical skills – no surprise given the current generation's technological literacy. Global employers are least satisfied with commercial awareness and negotiating skills, though they equally recognise significantly less need for these skills.



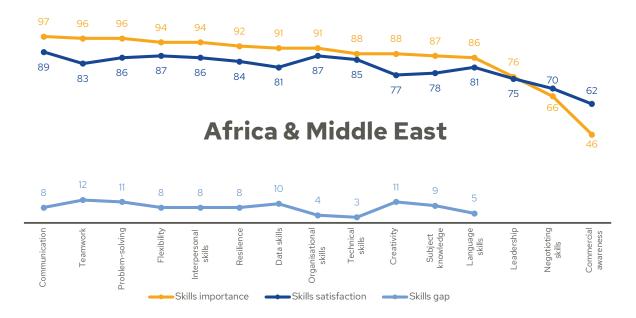


Employers in the **Asia-Pacific** region also value communication, teamwork, flexibility and problemsolving the most – with the addition of interpersonal skills. However, more notable skills gaps can be seen in many other areas compared with the global data – particularly in resilience, creativity, leadership and interpersonal skills. Employers from this region also value commercial awareness and negotiating skills much more, though they are generally as satisfied as global employers.

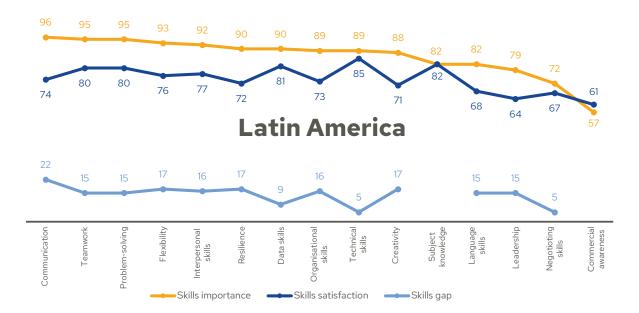


The skills employers in **Europe** deem to be the most important in graduate hires are communication, teamwork, flexibility and problem-solving. There are, however, notably fewer and smaller skill gaps, indicating that new graduate hires are generally meeting the needs of European employers. Once again, the most notable skills gaps is seen in problem-solving, however this is still significantly lower than the global average.

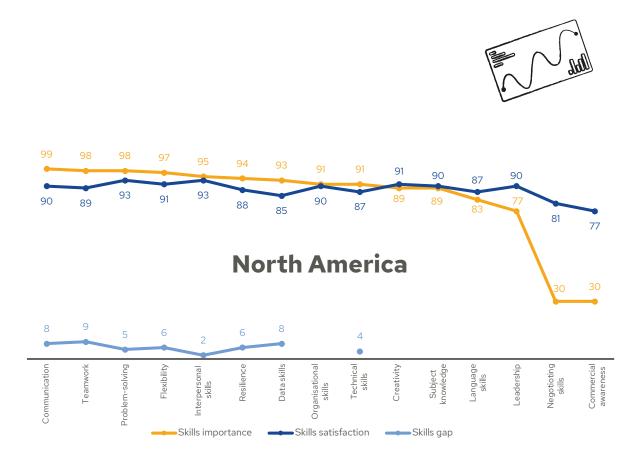




Employers from **Africa and the Middle East** consider the greatest skill gaps to be in problem-solving, flexibility and creativity. However, compared with the global average, employers from this region consider language skills more highly – exposing a notable skill gap in this area.



The greatest array of skill gaps, and the most vast, have been identified by employers in **Latin America** compared with any other region – the largest in problem-solving. Apart from subject knowledge and commercial awareness, it is clear that new graduate hires are, generally speaking, less likely to meet the needs of current employers in Latin America.



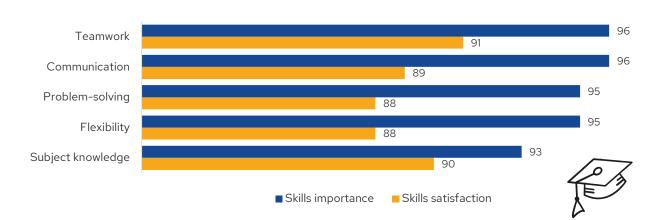
Employers in **North America** appear to be relatively satisfied with the skills they see in new graduate hires, with any skill gaps exposed being reasonably small. What is notable is the lack of value given to negotiation skills and commercial awareness compared with all other skills. Communication is considered to be very important by North American employers, receiving the highest rating compared with all other regions.



A breakdown by industry

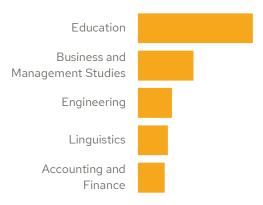
Education

As we have seen from the regional dissection of skill preference and satisfaction, not all employers value skills in the same way. Variation can also be seen among employers in different industries – with the type of work and organisation naturally playing a significant role in what skills are necessary to succeed in that area.



For employers in the education industry, teamwork and communication are valued the most, followed closely by flexibility and problem-solving. While these skills are considered to be important in most industries today, it is unsurprising to see them valued so highly in education given that many employers are responsible for communicating with students in a way that resonates with them, whilst also adapting their approach according to the individual needs of each student. Employers in education appear to be relatively satisfied with the most important skills possessed by new graduate hires. The most noteworthy skills gaps is in communication given that it is valued so highly yet there is a reasonable degree of dissatisfaction. While subject knowledge is understandably considered to be important by employers in the education industry, they are relatively satisfied in this area demonstrating that it needs little improvement.

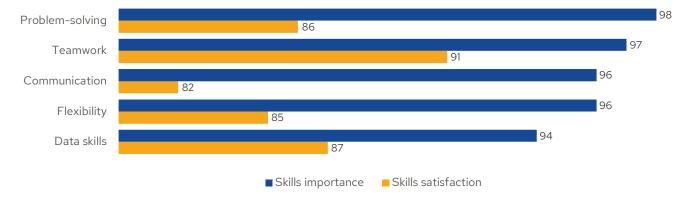
In term of experience, the vast majority of professionals in the education industry studied education (to maintain relevance, data reflects employers who studied no longer than five years ago). This gives a good idea of what field of study students should consider if they are looking for a career in a certain industry. Business and management was also a common field of study among employers in this sector, especially for C-level professionals and directors. While the fields of study remained consistent among various seniority levels, a significant proportion in middle management also studied marketing.



Education experience of education professionals



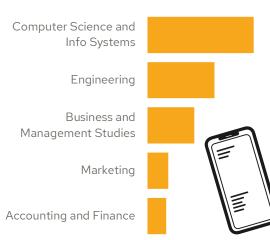
Technology



To stay competitive within the rapidly-evolving technology industry, it is critical for employers to identify any barriers or opportunities within their business and be quick to respond. This is likely the reason why problem-solving is considered to be the most valued skill by those in the technology industry. Naturally, data skills also feature in this list.

However, despite its high value, there is notable dissatisfaction among technology employers with the degree of problem-solving they are witnessing in new graduate hires. This dissatisfaction is also seen across several other skills, including communication. Regardless of the strong presence of machines in the work they do, those in the technology industry still need be effective communicators if they are going to lead or collaborate successfully, particularly given the complex technological issues they often have to solve. These skills-gaps expose areas of improvement that universities must address if they are to adequately prepare graduates for a career in this rapidly evolving industry.

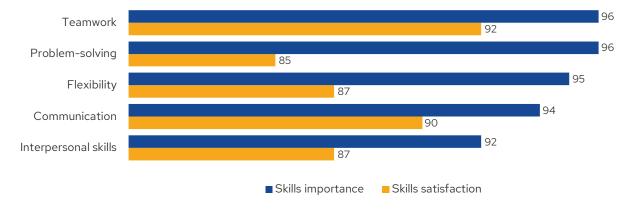
Computer science and information systems is the most common field studied by employers in this industry, followed by engineering. The top field of study for C-level professionals and directors remains the same, however this is followed by business and management.



Education experience of technology professionals



Finance and banking



As reported by <u>The FinTech Times</u>, almost half of UK consumers today prefer to engage with banks via apps rather than in person. It may therefore be a surprise to see interpersonal skills valued so highly by these employers. However, given the responsibility of managing a person's finances, trust between consumer and bank cannot be underestimated. Often, interpersonal skills are required in order to establish this trust initially or when managing complex or important financial decisions.

The top four skills remain consistent with other industries, with teamwork and problem-solving considered the most important and the notable skills gaps recorded in the latter.

It is no surprise that accounting and finance is the most studied field among these professionals, followed by business and management studies and economics and econometrics. However, this changes at the C-level and director level, with the majority of these professionals studying business and management studies. Unlike other roles, several specialists in this industry studied mathematics, suggesting an alternative route into this industry.



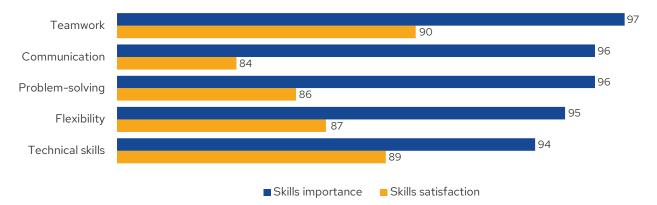
Education experience of finance and banking professionals

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Education experience of finance and banking professionals

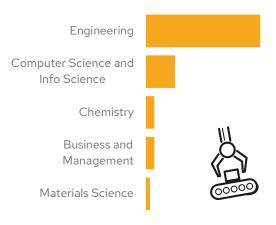


Engineering



Like employers in the technology industry, those in engineering value and share a reasonable level of disatifaction towards the communication skills seen in new graduate hires. However, compared with technology employers and other industries explored in this section, those in engineering assign greater value to technical skills. This is no surprise given that engineers often have to conduct complex and multi-layered projects that require a range of specialised skills including manufacturing, quality control, robotics, programming and design.

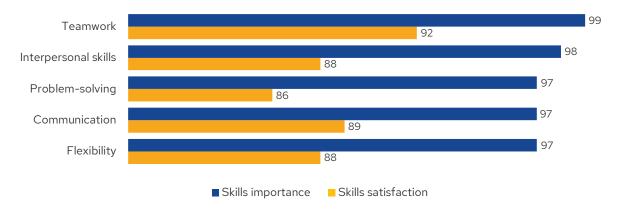
Engineering is the most studied subject among those in the industry by a large margin and is consistent regardless of seniority level. This may suggest that there is less flexibility with regards to what field of study leads to a career in engineering – information that may be of great value, not only to university careers advisors, but to students in the early stages of their university decision-making process.



Education experience of engineering professionals



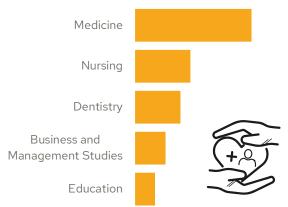




Health and medical

Health and medical professionals value interpersonal skills highly in new graduate hires, though there is a reasonable degree of dissatisfaction in this area. While medical professionals must possess a host of hard skills, the ability to communicate vital information to patients in a clear and empathetic manner cannot be underestimated. A slightly greater skills gaps is seen in problem-solving – a skill vital when navigating a challenging diagnosis.

Medicine stands out as being the most studied field ahead of a career in the industry, followed by nursing and dentistry. For specialists in medicine, biological sciences also seems to be an option – though medicine is still the most studied by them. HR professionals in medicine studied psychology, though this is also seen among other industries.



Education experience of medical professionals



"There is not one mould for a successful McKinsey colleague – our strength is in the diversity of our people."

Marie Christine Padberg Leader, Global Talent Attraction McKinsey & Company

McKinsey & Company is a global management consulting firm offering professional services to corporations, governments and other organisations.

"There is not one mould for a successful McKinsey colleague – our strength is in the diversity of our people.

However, those who join us do possess particular qualities and skills that help them succeed and make working at our firm a rewarding experience.

We continually look for people who want to dig into intricate challenges, people who are curious and excited to continuously learn and collaborate with others. While not a new skill, we are committed to the inclusive leadership approach and look for people who value and practise it. We don't need people who can just lead a team to deliver on a project. We look for people dedicated to looking for and respecting diverse thinking and approaches and know how to lead teams – and our firm – with that perspective. A focus that increases each year is tech. Digitisation is changing the consulting industry, and therefore technology and digital skills are more necessary at McKinsey and with our clients. We see more candidates who have coding, programming and other tech skills.

We look for examples of those dimensions in resumes across a wide variety of experiences, not just experience related to business. This includes internships, research, volunteer work, part-time jobs and military service. We're also hiring from 500+ schools globally, and that mix continues to expand and diversify."



Section 2: Disruptive forces

Is artificial intelligence set to alter the graduate employment market?

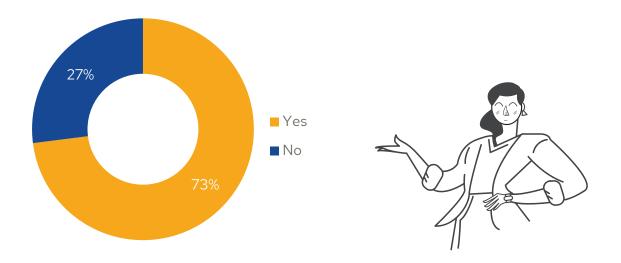


Artificial intelligence (AI) is often depicted in movies as a hyper-intelligent, looming threat to humankind. AI is the simulation of human intelligence by machines, yet in many cases, it can perform tasks much better than humans – with better accuracy, ability and capacity. While there is still a long way to go in its implementation, it is already being used in a multitude of ways by businesses and organisations – detecting patterns in vast volumes of data and interpreting their meaning, automating processes and even engaging with customers.

But AI has its limits. It's generally agreed <u>among experts</u> in the field that AI cannot be creative or empathetic, and, in most cases, possesses limited physical dexterity. While there have been <u>occasional</u> <u>claims</u> that AI is demonstrating signs of this behaviour, raising concerns that this technology will one day outsmart humans entirely, we are a long way off this reality.

Considering the strengths and limitations of AI, as it exists today and in the near future, can expose the potential impact it will have on certain jobs. For example, if AI is, as of today, unable to perform interpersonal or advanced negotiation skills, then jobs that rely on these, such as HR managers, social workers, lawyers and CEOs, face little threat. On the other hand, jobs that are centred on skills that can be performed by AI, such as market research analysts, telemarketers and perhaps one day, <u>even taxi</u> <u>drivers</u>, could be replaced entirely by machines.

Do you think artificial intelligence will provide a more cost-effective alternative to highly skilled jobs by 2030?



Another factor to consider when predicting the future of work is how employers perceive the technology. If employers are receptive to AI, it is likely to play an increasing role in future operations and, in turn, universities must prepare for a shift in the skills demanded of graduates in the future.

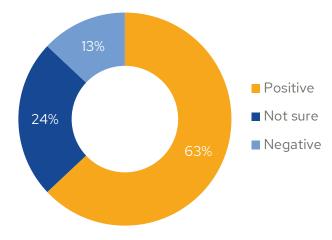
According to the 2022 QS Global Employer Survey, nearly three quarters (73%) of respondents think Al will provide a more cost-effective alternative to highly-skilled jobs by 2030. This reflects an awareness among employers that the capabilities of Al are advancing to such a degree that even highly-skilled jobs – those that require specialist training and education, such as lawyers, doctors, and architects – may be impacted.



It is very unlikely that AI will totally replace highly-skilled jobs by 2030 but, instead, it will substitute certain elements of these positions while expanding others. This not only frees up more time for employers to focus on business needs but its use will ultimately increase the efficiency of workplaces.

However, lower-skilled jobs, including clerical or routine manual roles, are threatened by advancing AI, and it is here that business owners will find opportunities for cost-saving given less need and spend on labour.

In your view, what is the social impact of artificial intelligence replacing some of the highly skilled jobs currently performed by humans?





Despite this mixed picture, 63% of employers think that artificial intelligence replacing highly-skilled jobs will have a positive impact on society. Not only does **evidence suggest** that Al will cause a net increase in jobs across many sectors, as it opens up new business opportunities or will as technological advances are made, but it allows people more time to apply creativity and innovation to solve complex societal issues.

The positive social impact of AI replacing elements of highly-skilled jobs is particularly clear within healthcare. According to **Forbes**, "Computers and the algorithms they run can scrub colossal amounts of data – much faster and more accurately than human scientists or medical professionals – to unearth patterns and predictions to enhance disease diagnosis, inform treatment plans and enhance public health and safety." Al is also beginning to have an impact on climate action, particularly in the areas of agriculture, water, energy and transport, with recent **research suggesting** it "could reduce worldwide greenhouse gas emissions by 4% in 2030".

While to some industries AI is an emerging feature, to others, it is already playing a crucial role. Of all industries represented in our study, employers in the technology industry rate AI highest in importance to the work they do, with nearly 90% of technology employers citing its value. This is no surprise given that the technology industry is not only utilising AI, but are key players in its development.



The research and development (R&D) and science sector also rates AI highly – with 84% of respondents in the field claiming the technology is already a key player in the work they do. According to a report by the **National Bureau of Economic Research**, investment in AI technologies is "likely to improve performance in existing 'search- intensive' research projects, as well as to open up new opportunities to investigate social and physical phenomena that have previously been considered intractable or even as beyond the domain of systematic scientific and empirical research."

Technology	89%	11%
Telecoms	88%	12%
Agriculture, fishing and forestry	85%	15%
Science, research and development	84%	16%
Finance and banking	84%	16%
Logistics and transport	81%	19%
Health and medical	81%	19%
Engineering	80%	20%
Education	80%	20%
Government and public sector	78%	22%
Media and advertising	77%	23%
Consulting and professional services	77%	23%
Manufacturing	75%	25%
Hospitality, travel and tourism	75%	25%
Consumer goods	75%	25%
Retail and Wholesale	74%	26%
Pharma and biotech	73%	27%
Law	69%	31%
Construction and real estate	68%	32%

Rate the importance of ai to your organisation

Important and very important

Not important





While there is still a long way to go until AI is a common feature of the learning experience itself, it already has many other uses within the education sector – with 80% of education employers claiming it is important to their organisation. **QS Enrolment Solutions (QSES)** have seen first-hand the benefits of incorporating **machine learning** into recruitment and conversion strategies at higher education institutions, with the capacity for it to convert 2.09x as many offer holders.

Given the potential of AI to expand and augment higher-skilled jobs, the advancement and implementation of AI is likely to positively impact graduates. However, this will only be the case if higher education institutions tune into the evolving knowledge and skills required from these industries as a result of AI - adapting their teachings accordingly and providing quality industry experience. According to one report by the <u>UK Government</u> "the impact of AI on the rise and decline of different occupations is likely to create skills gaps if people do not re-skill for the jobs most likely to increase in the future". However, that same report equally highlighted how, compared to those further along their career journey, graduates are more "adaptable" with the capacity to "make themselves complementary to AI rather than substitutable by it." Higher education institutions have a critical role to play in this.



"Al is a disruptive force, but it doesn't disrupt the need for creativity in the workforce."



Justin Edwards Director of Learning Programmes Mojang/Microsoft

Justin is currently working on game-based learning using the world's most popular computer game – Minecraft.

"Al is a disruptive force, but it doesn't disrupt the need for creativity in the workforce. For example, Al will not currently solve educational problems or provide solutions via game-based learning – that's still down to us.

For us, creativity is an essential higher-order skill we look for that can really make business impact. How do you provide education to children on tough topics? How do you do so in a sensitive manner? How do you do it in a way that's scalable and that people can easily access? Answering questions such as these requires a high level of creativity, a skill that is expected right through the work we do and remains difficult to find in new graduate hires. It's with the lower-order skills that AI supports us - enabling us to work in a more agile way around processes and procedures. Some issues require human-led creativity, but AI does provide useful automation – automating application process for an event we're working on say, or sifting through enquiries from customers on implementation. AI is a very supportive technology in many ways – it's an enabler. For us, it's assistive – it means I don't have to employ as many people as necessary to do certain things because we can automate those out.

Essentially, AI is disruptive technology, but its certainly not yet disrupting the need for creativity skills.

Section 3: Strategic planning

How can higher education institutions prepare students for an evolving graduate employment market?



Dr Paul Thurman is a veteran advisor to for-profit, not-for-profit and government clients with a focus on strategic planning, data analysis and decision-making, and executive education.



Dr Paul W. Thurman Professor of Management and Analytics, Columbia University

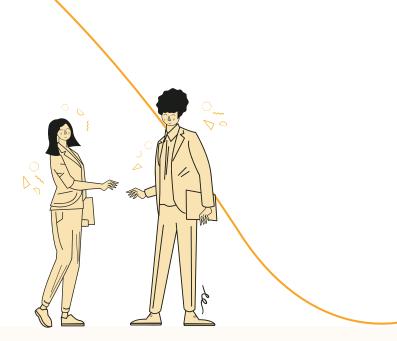
In his contributing chapter to 'The innovative management ecosystem: reskilling and upskilling the future workforce', Dr Paul W. Thurman writes on the importance of innovative and flexible learning at higher education institutions as well as industryacademia collaboration. Specifically on the potential of business schools to meet the evolving needs of employers, he writes:

"Business schools can become, if leaders are focused and quickly innovative, training academies focused on credentials and skillbuilding that, in turn, support significant portions of labour forces. This is a profound pivot, indeed – moving from degree-granting, relatively static curricula to innovative, everchanging, certificate awarding (and not just degree-granting) institutions.

By pivoting to upskilling institutions, or adding certificate and credentials programmes to existing degree-based ones, institutions can benefit from innovative curricula and training offerings while simultaneously benefitting local labour markets. One example of a public-private partnership in the upskilling space that brings together government, industry and academia is <u>Skilled</u> <u>Education</u>. Skilled Education in an online education provider in the United Kingdom (UK) and has been appointed by the UK government to develop a "flagship upskilling programme" to support small businesses. The UK government's 'Help To Grow Management' post-pandemic initiative aims to upskill over 30,000 business leaders with the help of Skilled Education over three years.

Skilled Education designs and delivers online learning pathways, microcredentials and degrees, and they have a successful history of working with partners such as University of Cambridge, London School of Economics, and UWE Bristol. Skilled Education believes, like so many companies and training academies, that COVID-19 has accelerated changes in the ways we work, learn and live. While most agreements between private firms and governments focus on policy and regulation, the agreement between Skilled Education and the UK government goes further and includes programme design.



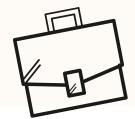


And while this model may seem relatively new post-COVID, it has worked successfully for other training academies in the past. Coursera and UpGrad, for example, have notable track records as international education companies that help governments with upskilling and training needs. Skilled Education expects its programmes that it designs in conjunction with the UK government to be delivered by over 50 UK business schools, alone.

But helping schools is not the only sector on which Skilled Education is focusing. Helping small and medium-sized enterprises recover from COVID-19 impacts is critical to both labour market and enterprise success since COVID-19 has accelerated the need for skills training in specific area without requiring degrees. The Help to Grow programme expects to utilise a 12-module programme to help business owners and leaders develop solid growth plans for their firms. Focusing on markets beyond the UK border is also part of the instruction being developed. As it stands now, any CEO or senior team member of a UK business employing between five and 249 people is eligible for the programme.

Filling skill gaps that have been identified by employees is a difficult problem to solve. But it is not because training is difficult. The challenge is in aligning market demand with employee desire in a flexible curriculum that can be easily changed over time in a government/policy structure that supports multiple partnerships to deliver an upskilled workforce. Getting all of these market players to align is not an easy task - the challenges of both scale and scope are difficult.

However, with more governments and academies realising that only public-private and private-private partnerships can help solve the upskilling conundrum, surely more labour forces—large and small, government and private—can realise value from the multitude of lifelong learning and upskilling platforms, content and management tools available today."

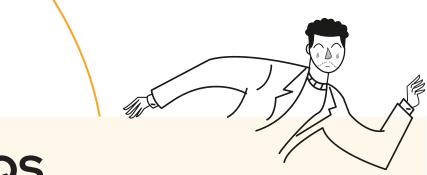


Conclusion

This report deals with a number of 'unknowns': What will the true impact of AI be on particular industries? What will the working day look like in the future? How will advancing technology impact the most in-demand skills? While we will continue to review these questions, what is certain is that, for the time being, the graduate employment market is rapidly evolving and may look very different in the not-so-distant future.

With this in mind, it becomes increasingly important for higher education to not only embrace flexibility when it comes to teaching, but to establish strong partnerships with those on-the-ground: the employers.





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