

# Education and Skills for Growth



### Section 1: Introduction

The UK's workforce is undergoing a fundamental transformation: competition for talent is fierce, while rapidly accelerating automation and technological advances are changing the way many companies work. Career paths are becoming less linear, with a growing need for retraining and lifelong learning.

As the needs of employers evolve, so too must the education provided by universities to ensure students gain the skills and experience needed to succeed in a modern workplace – and ensuring that they can adapt as new opportunities and challenges arise. Highly-skilled graduates remain in demand by employers and, with research showing the number of graduate vacancies in 2021 was 20% higher than in 2019, the need for graduate-level skills is continuing to grow. Across the UK, every year, our 24 universities already teach four out of five doctors and dentists, a third of all engineers, as well as 15,000 nurses and over 5,500 teachers.

Russell Group universities have a proven record of offering high-quality education across a range of technical, vocational and academic disciplines, with teaching from world-leading experts in their fields. Our students learn how to innovate and work independently, developing robust critical thinking skills and studying in a vibrant and diverse environment.

This ensures our graduates leave university with the knowledge, skills and broader experience required by employers so they are ready to work. This is demonstrated by the fact that in 2019/20 more than 80% of working graduates who studied at a Russell Group university were in a highly skilled job 15 months after graduation.



Our universities deliver excellent education in the social sciences, humanities and creative disciplines, as well as in science, technology, engineering and mathematics (STEM), to produce talented innovators that fuel our growing service sectors and creative economy.

The education offered by our universities is a unique mix of strong academic foundations informed by the latest research whilst also ensuring a close link to the needs of employers and industry. Through strong connections to regional and local partners, our universities ensure their teaching is responsive to employers' needs, technological advancements, and societal challenges such as environmental sustainability. Our teaching ensures our graduates have the tools to make a positive contribution to society, driving innovative thinking and problem solving.

### Section 2: Delivering education accessible to all

### Russell Group universities are creating more opportunities for anyone to access the high-quality education they need throughout their lives.

Our universities have a shared mission to ensure no potential student feels a world-class education is unattainable. The most underrepresented students are now 60% more likely to enter university than they were ten years ago, and 30% more likely to go to Russell Group universities than five years ago. Our students also thrive once on their courses, with over 95% of students on their undergraduate (first) degree completing their studies, compared to the Regulator's threshold of 75%. However, we know there is more to do.

Our universities are working with education partners at all levels. Whether it is providing materials for schools, training teachers, helping prospective students understand what university is about or even setting up their own schools and academy trusts – Russell Group universities are dedicated to giving young people the best start in life.

We understand that some students may require more time to develop their knowledge and confidence before undertaking an undergraduate degree. That is why many Russell Group universities offer high-quality Foundation Years in subjects such as medicine, dentistry and allied health professions to give students the time to adapt to being in full-time education, which often attracts students from more diverse backgrounds.

Making education more accessible is not just about young people. Our universities are already innovating to offer more flexible courses so people can access learning at different points of their lives, develop new skills and boost their careers. Often these courses are delivered through long-standing partnerships with local Further Education colleges.



#### The University of Warwick offers

part-time degrees to enable more options for individuals to upskill or retrain alongside family and work commitments. These include Warwick's Early Childhood degree, Social Studies degree and Counselling and the Psychotherapeutic Relationship degree. Courses are delivered through Warwick's Centre for Lifelong Learning which, for the past 30 years, has been a centre of expertise in the education of lifelong learners with a focus on enabling adult learners to achieve their personal and professional goals. The Government's plans for lifelong and flexible learning are an exciting opportunity and we are ready to work with them and employers to develop new types of provision that complement our internationally renowned full-time programmes. Seventeen Russell Group universities already deliver advanced, higher and degree apprenticeships with five Russell Group members leading or supporting the establishment of the UK's Institutes of Technology (IoT).



Vewcastle University

Newcastle University is leading the new Institute of Electrification and Sustainable Advanced Manufacturing, a project that brings together the North East IoT and key regional education providers. The Institute will address industry needs by developing a flexible, high-quality Power Electronics, Machines and Drives (PEMD) training pipeline from Level 3 to 7. The Institute's curriculum team will be creating PEMD content to enrich T-Levels, Higher Technical Qualifications and Apprenticeship programmes. Apprenticeships create opportunities for students to study whilst working, meaning that an apprentice will benefit from both structured industryled training and subject-expertise during their off-the-job training.



The **University of Liverpool** is engaged in close collaborative partnerships with a variety of employers to deliver highly specialised degree apprenticeships in health that fill identified regional and national skills gaps. Strategic partners include Liverpool University Hospitals NHS Foundation Trust, The Christie NHS Foundation Trust, Clatterbridge Cancer Centre, TCG Medical Services Limited, and Mersey Care NHS Foundation Trust.



The **University of Sheffield**'s Advanced Manufacturing Research Centre (AMRC) Training Centre has trained over 1,700 apprentices, 80% of whom came from within South Yorkshire and half from the most deprived 30% of areas in England. The AMRC Training Centre has worked with 400 manufacturing firms to deliver these apprenticeships, which are mostly advanced apprenticeships (level 3). Business partners range from global companies like Boeing, Rolls-Royce, and McLaren Automotive to smaller companies and specialist suppliers.

## Section 3: Specialising in research-intensive education

### Our universities specialise in researchintensive education, informed, co-designed and delivered by world-leading researchers.

The unique learning environment at our universities enables students to learn from leading experts in their field and become active participants in the production of new knowledge and innovations. This generates a dynamic system where research and teaching can directly benefit from each other. A recent survey by the British Academy highlighted the value students place on their lecturers embedding the latest research into their teaching materials. Our ambition is to produce graduates who can help develop new solutions to the most complex local and global challenges. Our universities provide outstanding facilities from science laboratories to state-of-the-art libraries, collections and cutting-edge technology to ensure students are learning in a practical setting. It also means students can see the real-world application of research whilst studying, and benefit from the very latest knowledge and thinking in their discipline and beyond. The impressive breadth of disciplines offered at Russell Group universities provides exciting opportunities for novel interdisciplinary work.





At the **University of Leeds**, as well as undertaking research as part of their undergraduate course, students can apply for a paid summer research programme through the 'Q-Step' scheme. Aimed at upskilling social science students with desirable quantitative research skills, Q-Step at Leeds provides a great opportunity for undergraduate students and leading academics to collaborate on a live research project.

Over 90% of research at Russell Group universities has been rated world-leading or internationally excellent. Students at our universities directly benefit from being a part of this community and can contribute to advancing knowledge, including undertaking their own research and inquiry during their studies, becoming researchers in their own right, and taking these skills into the workplace.





The **University of Nottingham**'s School of Chemistry developed an "Industry-Ready Graduates" strategy with GlaxoSmithKline (GSK). Modules are co-created and delivered in partnership with GSK and give students first-hand experience of how drugs are designed and developed in the pharmaceutical industry.

Russell Group universities provide a key ingredient for the Government's plans to deliver growth: a pool of well-rounded graduates with the skills needed to propel leading sectors and grow new ones, driving innovation, creativity and productivity. After completing their studies at a Russell Group university, a graduate will be able to think critically, analyse and solve complex problems, and bring ideas and teams together. All these skills will help to ensure they are responsive to the needs of employers in a constantly evolving labour market.



At **Durham University**, students and graduates can access wraparound support and state-of-the-art facilities at the Hazan Venture lab, the university's purposebuilt space for entrepreneurship. Through specialist mentoring opportunities, networking and start-up pitching events, students have a space where they can gain the skills to start and grow a business of their own, working together and with worldleading companies to develop new solutions to industry and societal problems.

Our universities are also nurturing successful entrepreneurial talent. Start-up businesses run by Russell Group graduates attract around five times more external investment, have a higher turnover and employ more people than the average UK graduate start-up. Their ventures are more likely to survive and grow into successful businesses long term.



The **University of Oxford** facilitates around 1,800 global internships for its students each year. These innovative internships, hosted in partnership with SMEs, charities, research institutions and multi-nationals, offer experiences in all sectors including entrepreneurship and social enterprise, sustainability and the environment as well as technology, data, machine learning and AI. The internships are designed to accelerate students' professional and research skills which they can apply beyond their degree.

## Section 4: Addressing skills gaps to deliver UK economic growth

### Russell Group universities are helping to address specific skill gaps in key areas needed for the future growth of the UK economy.

The need for data skills will only increase as automation and new technologies are adopted widely around the world. Last year, Government research identified between 215,000 and 234,000 roles being recruited by UK companies that required hard data skills. Our universities are well placed to respond to this need with nearly two thirds of maths graduates and six in ten graduates with physical sciences qualifications, disciplines with a great emphasis on high-level data skills, having studied at Russell Group universities. But equally, we are also teaching key data handling and analysis skills in disciplines such as humanities and the social sciences, creating a deep pool of transferable skills for our graduates.



Imperial College London

At **Imperial College London** corporate professionals undertake a 14-month data skills course to gain the critical knowledge, skills and behaviours needed to understand business intelligence. This upskilling programme is fully funded through the Apprenticeship Levy and gives employees the professional skills increasingly needed in a data-driven economy.

Digital skills are another gap in the UK workforce that our universities have a key role to play in closing, with estimates suggesting the current skills gap costs the UK economy as much as £63 billion a year in potential GDP.

Digital learning and online tools are already being used at our universities to enhance teaching and learning. Our members will continue to incorporate new techniques into course development so students are receiving a high-quality and 'future proof' education. All students, no matter what their discipline, will leave our universities with the essential digital skills they need to succeed in the workplace. The ground-breaking research and innovation nurtured on our campuses is a magnet for business and industry and means our universities are wellplaced to build partnerships with employers to anticipate future changes in employment needs. Building on the success of existing innovation clusters, our members are taking advantage of links with business and regional leaders to create additional high-value jobs and kickstart our economy. Working closely with employers is crucial to ensure all of our courses – from higher technical qualifications to degree and postgraduate level – meet the needs of employers.





At the **University of Exeter**, a new engineering programme (Eng2020) has been designed to focus on global engineering challenges and entrepreneurship. Engineering education at the university is moving towards preparing graduates to make realworld impact, adapt to rapidly changing technology, and develop 21st century skills. By equipping graduates to succeed in high-value sectors, our universities play a critical role in driving economic growth: a single cohort of UKdomiciled students at Russell Group universities is estimated to contribute more than £20 billion to the economy over the course of their working lives, including £11 billion in tax and NI contributions.

Our most powerful asset to address UK and global challenges are our students. One of the greatest global threats is the impact of climate change. All students at a Russell Group university are given the opportunity to learn about environmental sustainability so that future generations can help tackle the issues caused by climate change.

Programmes like the University of Edinburgh's Futures Institute are innovating in this space, combining education from STEM and social sciences, arts and humanities (SHAPE) subjects to foster interdisciplinary skills needed to tackle climate change. The Government's Ten Point Plan for a Green Industrial Revolution aims to drive £100 billion of private sector investment by 2030 and support 480,000 green jobs in renewables by the end of the decade. It is our ambition to ensure graduates have the technical skills and knowledge to progress into these jobs, drive societal change, support the UK's place at the heart of the green economy and live more sustainable lives.



The **University of Manchester** is ensuring that all students develop sustainability skills and competencies as part of a socially responsible curriculum. Flagship initiatives include the award-winning University Living Lab, where students carry out real research to help organisations around the world meet their sustainable development goals. The university has also developed the 'Creating a Sustainable World' course to equip students with the knowledge and skills needed to address the United Nations Sustainable Development Goals. Section 5: Creating a supportive environment for students

Leaving school or work to study at university can be both exciting and challenging. Our universities are dedicated to supporting students to make that transition so they can thrive, while enhancing the 'soft' skills employers value such as resilience and adaptability.

Students at Russell Group universities benefit from a range of support as they transition from post-16 education into degree-level study. **This includes dedicated pastoral support for students as they move away from home – often for the first time – so that they can learn to be independent, thriving in new, challenging environments.**  Ensuring a smooth transition into university and promoting wellbeing has a positive impact on academic attainment as well as wider educational outcomes. With the Open University, the Russell Group has set up a resource of free courses, under the banner Jumpstart University, offering people about to start university the chance to learn about financial management, study skills such as essay writing and how to look after their mental health.

Russell Group universities are increasing investment in hardship funds, student support and mental health services. This means not only upping their spending on traditional services like counselling, but also drawing on the world-leading research undertaken at our universities to implement new approaches and partnerships that help students take steps to protect their mental health proactively.



UCL's Institute of Mental Health is playing a pivotal role in improving student mental health support across the UK. They are a central partner in a project commended as good practice by the Office for Students (OfS) in its new 'Joint working between providers and the NHS to support student mental health' initiative. Their 'SPEQS Toolkit' is designed to help universities across the UK to develop and enhance their partnerships with the NHS to provide holistic support for students' mental health and wellbeing.





#### UNIVERSITY<sup>OF</sup> BIRMINGHAM

The **University of Birmingham**'s Pause@ UOB service is a student co-produced, no wait mental health drop-in hub available on campus and online. This service focuses on early intervention approaches to mental health support, wellbeing community development and de-stigmatisation. Originally funded by the OfS Challenge Competition, the service was able to support over 2,500 students over the pandemic and is now co-funded in partnership with Birmingham Women's and Children's NHS Foundation and the Children's Society.

## Section 6: Conclusion: Education for the future

### As educators responsible for teaching a quarter of all UK-based graduates our universities have big ambitions for the future of education.

Our universities are constantly re-assessing their models of education to ensure every student can meet their potential. A student's pathway needs to be individualised to their own learning needs, with expanded routes into flexible and lifelong learning. The frameworks to provide a coherent pathway for students taking individual modules, building toward a final award, should be sector-designed.

The intensive, skills driven education provided by Russell Group universities demonstrates the value of sustainable, long-term investment in high-quality higher education. Russell Group universities will continue to build on their local, national and international partnerships to ensure their courses are always informed by the latest research and expertise and are responsive to the changing requirements of employers and the skills needs of their regions.

Students will be given more opportunities to engage critically with course content, applying their knowledge to real-life issues. Innovative assessment will become an even more important part of the learning process, with student, academic and employer reflection on the best ways to test and reinforce the skills graduates will need. Learners will also benefit from different forms of assessment with an enhanced focus on collaborative and multidisciplinary learning, building critical skills such as teamwork, analytical thinking and leadership.

Digital tools will play an increasingly prominent role in enriching education. This will include the use of Artificial Intelligence (AI) in learning and assessment which will bring both challenges as well as opportunities. The coming years will be a key moment for universities to consider the ethical considerations of using AI and to identify how best to harness the benefits of this technology and embrace change whilst ensuring academic rigour.

Thinking about the future of education requires imagination but also the appetite to accept an element of risk. Our universities will be ambitious in creating academically stretching, increasingly flexible learning opportunities and course curricula. We will continue to anticipate the needs of the future, delivering world-class education to more diverse cohorts than ever before.

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