



# RESILIENCE AND RECOVERY: COLLEGES AND UNIVERSITIES RESPONSE TO COVID



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## RESILIENCE AND RECOVERY: HOW OUR COLLEGES AND UNIVERSITIES RESPONDED TO THE COVID PANDEMIC

This report, through a selection of highlights and case studies, will show how our colleges and universities – with the support of SFC – have responded to the unprecedented challenge of the covid pandemic. Throughout the year institutions have leveraged the talent, hard work and resilience of their staff to continue to deliver outcomes for their students in uniquely challenging circumstances. And as we emerge from the pandemic and begin to rebuild, Scotland's colleges and universities will be key to sustaining our economic, social and cultural renewal.

Since the start of the pandemic our institutions have focused on the delivery of outcomes and impact for students by supporting those already in education at schools, colleges and universities, those who need upskilling or reskilling opportunities, and those looking to re-enter employment. They have done this while sustaining their efforts to promote and support fair access, diversity, sustainability, and deliver the high-quality learning, research and innovation we have come to expect.



PHOTO: PERTH COLLEGE UHI



SFC's ambition has been for Scotland to be the best place in the world to learn, educate, research and innovate so that all of our nation can flourish. As we recover from the pandemic and look to the future, our commitment to that ambition is as strong as ever. Our review of coherence and sustainability aims to support the co-design of a smart learning ecosystem that can respond effectively and efficiently to the challenges and opportunities of an uncertain world. This report shows that we have all the necessary components to achieve that ambition. Our colleges and universities have proven to be flexible, responsive, imaginative and committed to the communities they serve, delivering value and impact for the significant public investment they receive.

Recognising that the past year was extraordinary and anomalous for the sectors, with the pandemic impacting institutions in different and diverse ways, we asked colleges and universities to seek to maintain their baseline performance against a more focused set of key Outcome Agreement measures for 2020-21. Overall, the sector has been successful in this. It does mean, however, that for the purposes of this report we have focused on case studies and examples of good practice, rather than provide a commentary on progress against key measures. We will review and recalibrate Outcome Agreement performance measures as we take forward the recommendations of our review and develop a national impact framework.

## OUTCOMES FOR STUDENTS

### QUALITY LEARNING, TEACHING AND PARTICIPATION

Despite the unprecedented disruption of the pandemic, there is a generally positive picture that we explore in more detail below, particularly around the transition to blended learning, the response to digital poverty and access, mental health support, and enhanced support for disadvantaged students.

Data from the 2020 National Student Survey (NSS), open before and during the start of the pandemic, showed that 85% of final year students at Scottish HEIs were satisfied with the quality of their course, broadly in line with previous years and the highest amongst the UK nations. The recently published NSS 2021 results show that while student satisfaction has dropped across the UK, almost 80% of those responding were satisfied, a remarkable outcome in unprecedented circumstances. The results were well above the UK average of 75%, with the University of St Andrews remaining the top non-specialist institution in the UK. There was no annual College Student Satisfaction and Engagement Survey in 2020 due to the impact of the pandemic on fieldwork.

### FAIR ACCESS AND TRANSITIONS

SFC has used the Outcome Agreement process to drive forward improvements towards fairer access, securing progress with the challenging targets set out in the final report of the Commission on Widening Access (CoWA), alongside institutions' statutory obligations

to ensure fair treatment of protected characteristic groups.

One of the most encouraging findings from our review of college and university interim outcome agreements has been the continued commitment to ensuring fair access. SFC asked institutions to sustain progress made against key measure of success over the past year, including recruitment from the most deprived areas, but recognising progress over the emergency year would be extremely challenging. The evidence suggests that institutions have done this, with many setting out commitments for further improvement despite the pressure on their limited capacity and resource in meeting the immediate challenges of the pandemic – demonstrating the sectors' ownership of and commitment to the fairer access agenda.

Securing fair access has relied on colleges and universities reaching out to students from disadvantaged backgrounds in their communities and supporting their engagement with the often unknown and intimidating post-16 learning environment. This in practice has meant direct face-to-face contact with prospective students in their schools, colleges, or on campus at open days and summer schools, to address any anxieties and preconceptions about the college or university experience. Clearly the pandemic has made these engagements much more challenging.



## CAREER TRANSITIONS FOR VETERANS

Dundee & Angus College has well established links with the local armed forces and the veteran communities that have grown up around the area's military bases. The College was an early signatory to the Armed Forces Covenant, and works alongside ex-service personnel and agencies to ensure that guidance and entry arrangements take account of the needs of those serving in the armed forces and those whose educational journeys or outcomes may have been disrupted. Recognising that many ex-service personnel suffer mental health issues and have problems adjusting to civilian life, the College is a member of the Veterans Careers Transition Partnership offering career transition guidance, skills workshops, vocational training and support for routes to employment.

Colleges and universities have moved swiftly to migrate much of their core access programmes online, for example, colleges in the Glasgow region have maintained a coordinated fair access programme with online application systems, open days, information sessions, and interviews, while West College Scotland's Community Outreach programme has developed a blend of outreach activities online and in safe conditions on its campus rather than in local schools. In the university sector Heriot Watt University has delivered its *Brightest Watts* summer school for S5 learners from disadvantaged backgrounds entirely online throughout the year.



## NEW PATHWAYS FOR DISADVANTAGED LEARNERS

An initial investment from SFC enabled the creation the University of Glasgow's HNC Articulation Programme with FE College partners in 2018-19. The programme introduced new routes for learners from disadvantaged backgrounds to enter year 2 of an undergraduate programme – with full credit for their previous learning – in a wide range of subjects. The programme provides a range of routes of entry for learners, while offering the benefits of both a university and college education. From a single HNC in 2018-19, the programme now includes 13 bespoke HNC programmes with 7 partner colleges.

Through the programme the University has doubled the number of entrants to its UG programmes from colleges, with further growth expected in the future. The programme is open to students who are care-experienced and estranged, have caring responsibilities, refugee or asylum status, or are from the most deprived postcodes.

A positive outcome of the move towards more online outreach activity has been the partial removal of the constraints of distance, scale, and time, and greater scope to offer more tailored engagements. Queen Margaret University, for example, has temporarily delivered its QMAAdvance transition programme online, enabling it to significantly expand the number of individuals and groups involved. These developments point to a more blended approach to access and outreach activities in the future that can complement – but not replace – the face-to-face and on campus engagements that have proven to be effective in building trust with students from the hardest to reach groups.



## IMPROVING ACCESS TO COLLEGE FOR CARERS

West College Scotland has been working closely with the Carers Trust and Driving Change in FE project to improve access to college courses for carers and ensure wellbeing and support throughout their time at the college. Through the project WCS is on course to receive Carers Trust Going Further accreditation for its work to tailor support to improve retention, attendance and achievement of young adult carers. The College has been successful in increasing the number of carers and other vulnerable groups by 38% during 2020-21 due to concerted efforts of its student services team.

## ADDRESSING DIGITAL POVERTY

Students, and prospective students, from deprived communities are less likely to have access to the necessary ICT equipment and broadband access they need to fully participate in online learning – and to access the wider range of online support offered by universities and colleges. Institutions were quick to recognise that the dramatic 'pivot' to online delivery represented a significant new barrier to students from deprived backgrounds and have made great efforts to lend new and repurposed laptops and other equipment to students identified as most in need. As part of its Campus Central project the University of Stirling introduced a new facility that provides students with a range of different laptop loan options

from 4 hours up to 3 months to address specific needs, while Borders College has loaned over 415 laptops to its students in the past year. The University of Dundee has made available mobile dongles for some students to improve their access to Wi-Fi, and has been working to make software available to students for use at home on their own computers. Recognising the significant demand from students, SFC has invested an additional £5m from the Scottish Government to help bridge the 'digital divide' by supporting colleges and universities purchase ICT equipment. We estimate that this funding will eventually support over 13,000 students from disadvantaged backgrounds engage better in remote and online learning.



## FINANCIAL SUPPORT FOR THOSE MOST IN NEED

With the ability of students and their families to work and earn money severely curtailed by the pandemic, colleges and universities have stepped up to invest significant additional resource to enhance their tailored support to those students identified as being most in need or impacted by the pandemic. The range of support from institutions for their students has been wide and diverse. The University of Aberdeen, for example, offered students from Scotland's most deprived communities free accommodation for their first year of study, while West Lothian College has continued to provide free hot lunches for students, and has introduced a free hot breakfast from 2021 to ensure that its students are not too hungry to learn. The University of Edinburgh has agreed to support hotel quarantine costs for those who are required to be on campus for learning and teaching, while the University of Glasgow provided over £3m in one-off emergency support for basic living costs from its hardship fund to over 3,000 of its students over the past year.

Institutions have reprioritised funding, used financial reserves, or – in the case of the University of Aberdeen – sought assistance from their alumnus, to augment funding available to address the unprecedented demand for student hardship relief during the pandemic. As part of a package of support from the Scottish Government to address student financial hardship, SFC has also allocated £8m of new and redistributed in year funding to FE students in colleges, with a further £17m distributed by SAAS directly to HE students at college and university.



### HELPING YOUNG PARENTS OUT OF POVERTY

West College Scotland, in partnership with West Dunbartonshire and Inverclyde Council successfully secured £60k from the Scottish Government's Tackling Child Poverty fund for a 'Learning beyond Lockdown' project to help young parents in poverty have a sustainable route to positive destinations and a route out of poverty. The project will support young parents in further education, acknowledging the particular support they need and enabling them to build a future for themselves and their families.



PHOTO: FIFE COLLEGE

## TRANSITIONS

Over the past year colleges and universities have worked hard to retain focus on their work with partners to develop new, or enhance existing, pathways for students through school, college and university. The sectors' outcome agreements give a positive but cautious picture of the impact of the pandemic on learner journeys. Fife College has seen 513 students progressing to degree programmes over the past year, and now has formal agreements for 299 full credit articulation routes for 70 of its HN courses. West College Scotland has reported an increase in the volume of guaranteed places on offer and an increase in application rates to undergraduate programmes through its maturing partnership with Glasgow Caledonian University. Nevertheless, there is some frustration that the limited availability of critical work placement opportunities due to the pandemic will impede some students' learner journeys, and concern that the significant increase in direct entrants to UG programmes from school this year will squeeze out articulating students in subsequent years, threatening the progress made through college and university partnerships.



### REGIONAL LEARNER PASSPORTS

Colleges and universities in the south-east of Scotland have taken their individual collaborations to the next level by establishing a Regional Learner Passport Partnership to strengthen individual learner pathways between each institution and make them easier to navigate. The partnership launched a new Pathways app in July 2020 giving school leavers, students and their parents a tool to navigate and demystify the often complex and difficult further and higher education pathways without having to contact multiple institutions. The App also makes it easier for students to personalise their learner journey, moving from college to university with full credit awarded for prior learning. Students were engaged in every stage of its development to ensure that it works for them.

## ONLINE AND BLENDED LEARNING

The ‘pivot’ to online and blended learning has been perhaps the greatest and most debated cultural shift in how our colleges and universities deliver their programmes for many years. The trend towards more teaching in an online environment has been evident for some time, allowing students greater flexibility in how and where they study, but during the pandemic online teaching became critical to enabling the majority of students to continue their studies during successive lockdowns and campus closures. For colleges particularly, the distance travelled since early 2020 in supporting staff and students to make the switch to an online learning environment has been a remarkable achievement.



### SHARING EXPERTISE IN ONLINE LEARNING

The Open University in Scotland (OUS) has been a pioneer in distance learning, not just in Scotland, but globally, and is recognised as world leaders in the research and delivery of online and digital education. During the pandemic OUS shared its pedagogical expertise and experience of delivering high quality and impactful online learning across the education sector, supporting primary, secondary and tertiary educators to pivot their learning online. As part of this, OUS developed a new microcredential *Online Teaching for Adult Learning* programme in just 6 weeks, launching in June 2020, alongside a weekly webinar hosted by OU academics to support those looking to redesign content to online provision. OUS also developed a dedicated OpenLearn platform for educators, with over 1000 free courses supporting online delivery, home schooling and family learning. The *Take your teaching online* course on this platform shares fundamental knowledge needed to deliver effective teaching online, including: sharing the experiences of leading educators; introducing cutting edge research; explaining ideas and tools that shape how to teach and learn online; and supporting participants to adopt useful methods that will guide them to test out these new ideas in their own practice.

Colleges and universities responded quickly to the urgent need to enhance the skills and capacity of their academic staff to deliver learning online, developing new materials on digital and remote pedagogy, new approaches to make on-line delivery more engaging, and enhanced mentoring and support. These efforts often took the form of centralised hubs with academic and digital learning specialists dedicated to staff development and online collaborative platforms. Forth Valley College launched its own Learning and Digital Skills Academy to develop and support staff and stakeholder’s digital skills, while Ayrshire College’s learning and Development team held an innovative online learning and virtual CPD month in June 2020 with online and digital skills focused conferences and webinars. In the university sector Glasgow Caledonian University developed a new ‘Going Digital’ strategic

framework introducing guidelines, tools, and support to staff, while Napier University created a university-wide project, the Digital Support Partnership, to develop and share expertise and resources.



### PROMOTING INDEPENDENT LEARNING

North East Scotland College was well positioned to react to the challenges of the pandemic and associated lockdown. Since 2013 the College has embarked on the transformational BYOD (bring your own device) and Digital Futures projects, to enable large-scale organisational change, underpinned by ICT, to promote independent learning, increase active and self-directed learning, give learners more choice in how they engage and create institutional efficiencies.

These innovative strategies enabled the College to seamlessly adapt to the unique circumstances experienced as a result of the pandemic – switching to blended and fully remote delivery and ensuring equal access to the virtual environment. Central to its approach was building the confidence and capability of staff, supporting them to acquire the necessary skills to thrive in a digital environment and pass these on to students.

In response to the rapid shift to online learning the College created a bespoke Teaching online at NESCol course that addressed the fundamental requirements of creating, curating and evaluating effective online learning environments, ensuring that all students across the college received a consistent and high-quality online experience.

Colleges and universities reported growing confidence of students in developing independent learning and digital literacy skills. Students have also been more involved in the planning of their courses, using the freedom of collaborative learning platforms to become more engaged in how and what they learn. Digital champions too have helped support students enhance their digital literacy, and the pivot to online learning has also nudged students to participate in classes, seminars and learning events – some overseas – that would a few years ago be inaccessible. Dumfries and Galloway College has introduced graphics tables in the teaching of its engineering and maths programmes, and used video streaming of practical techniques for creative industries students, while all of West Lothian College’s 120 accountancy students were able to take part in a previously inaccessible seminar from the ACCA professional accounting body.

In the university sector the University of Stirling introduced a ‘partners in learning’ approach using groups of students from across the institution to develop online learning training for staff and ‘road-test’ new online learning modules and institutional policies. The University of the West of Scotland has invested over £200k to develop a series of student community building projects to address the isolation and separation experienced by many students during the pandemic, including developing effective digital buddy systems, collaborative creative academies, student-led conferences and events, and online games and team-tasks.



## IMPLEMENTING ONLINE LEARNING STRATEGIES

Perth College UHI's Creative and Engaging Learning and Teaching Programme teaches participants how to design and plan lessons. As part of this process participants are introduced to the theories on how students learn and how these theories may be implemented using different learning strategies. Participants learn about the use of assessment and feedback, digital learning technologies and how to professionally reflect and evaluate their teaching practice. The programme empowers those taking part with the knowledge and skill on how to develop their classrooms, both physical and virtual, into better learning environments so it leads to more effective and engaging learning and teaching.

## STUDENT MENTAL HEALTH AND WELLBEING

Positive mental health is fundamental to students' ability to progress and make the most of their education experience. In recent years there has been a significant increase in the number of students in our colleges and universities disclosing mental health issues, with many more struggling in silence. The impact of the pandemic, including social isolation and financial concerns, has intensified this public health crisis with huge demand for counselling and support across the sector.

In 2018, The Scottish Government provided SFC with £20m funding for the provision of 80 additional counsellors for colleges and universities. Data for AY2019-20 indicated that the number of counsellors in the sectors had

increased by more than 50FTE following the first year of investment, including more than 46FTE counsellors directly employed by colleges and universities, and other counselling provision including online counselling, and contracting of external specialist services.

Colleges and Universities have also continued to put in place a wide range of mental health support for students alongside enhanced counselling provision. In December 2020, SFC awarded a further £1.32 million of additional funding to the sector to support to respond to the impact of the pandemic on students' wellbeing. Institutions were given flexibility in the use of this funding, allowing them to respond in new and innovative ways to the needs of their students.

## BUILDING EMOTIONAL RESILIENCE

The University of Edinburgh has worked with the Foundation for Positive Mental Health to provide free access to all students and staff to the Feeling Good App, an evidence-based self-help programme. The skills training programme teaches how to calm the mind and develop a positive mind-set, enabling greater emotional resilience to deal more effectively with challenges of working life. The app contains a safe and effective programme, Positive Mental Training, that is widely used within the NHS in Edinburgh, for increasing wellbeing and recovery from stress, worry and low mood. The programme is derived from sports psychology, which takes users through a set of 12 physical and mental exercises, allowing them to switch to a helpful state of mind and let go of the negative emotional triggers, which underpin distress, whilst simultaneously increasing their concentration and focus.

A number of colleges and universities have used this funding for the recruitment or expansion of dedicated mental health wellbeing staff, including Wellbeing Advisors, Mental Health Mentors, Learning Support Tutors and Residence Life Assistants to support students isolating in student accommodation. The University of Glasgow has employed a Mental Health and Wellbeing Campaigns adviser who is working with their Communications Team to deliver regular content through a variety of channels, developing psychoeducational workshop content and an online wellbeing module for students. The University of Strathclyde have appointed staff to develop and support a peer wellbeing support project, which will include liaising with the student's association to set up student led initiatives, and the Resident Life programme to develop peer support in halls of residences.

Across the sector there has also been widespread delivery of courses and workshops focused on resilience, enhancing student mental wellbeing and building their capacity to address the additional pressures of the past academic year. For example, South Lanarkshire College's counselling team has delivered workshops focused on addressing common concerns that students have experienced as a result of the pandemic, with a strong focus on resilience strategies as well as providing a comprehensive overview of both the external and internal support services and resources available to help support mental health and wellbeing. Institutions across the

sectors from University of Dundee to South Lanarkshire College have sought to increase the pool of trained staff and student mental health first aiders who are trained to help students in distress through Applied Suicide Intervention Skills Training (ASIST).

There have also been activities to identify and support student groups more vulnerable to the impacts of the pandemic. Dumfries and Galloway College, for example, are working with Young Scot to develop a pilot for care experienced students, and will co design a package of measures to support retention, success, and positive destinations, while Glasgow Caledonian University created a fund to provide support for international students in financial crisis, including those unable to return home from the UK, with support in getting home.

On a sector wide basis institutions and student associations are working together to share ideas and best practice in supporting students with mental health challenges through the NUS Scotland Think Positive's Student Mental Health agreement project ([SMHA](#)), with 24 colleges and universities currently signed up for 2020-22. SFC is working with Think Positive to develop guidance to further encourage and support institutions to sign-up to the project and develop Student Mental Health Agreements.



PHOTO: GLASGOW CALEDONIAN UNIVERSITY

## OUTCOMES FOR STUDENTS

### RECOVERY FROM, AND RESPONSE TO, THE PANDEMIC

While our universities research activities were significantly disrupted as a result of the pandemic, with many research spaces closed, access to laboratories and facilities curtailed, and staff furloughed, the evidence suggests that research was not impacted to the same extent as delivery for students. SFC allocated additional one-off funding of £95m to universities during 2020 and 2021 to protect their world-leading research against the immediate financial impact of the pandemic. Institutions were given flexibility in how to best use this additional resource, with much of the funding used to secure the jobs of world-class researchers, and allow PhD students – the future of Scottish research – the extra time and resource needed to complete their work. Returns to SFC show that over 300 researcher posts at all levels from across the sector were supported with this funding, ensuring that our long term investment in Scotland's research capacity was secured. Some of this funding was also used to 'top-up' the pay of furloughed staff, ensuring that an additional 500 researchers received their full salaries.

Universities have made significant additional investment, from SFC and from their own resources, to ensure that research post-graduate students have the necessary time, funding and resource to complete their research. Over 1,500 students have so far received costed extensions to mitigate the impact of disruption to their studies, with many more receiving time extensions, hardship funds and fee waivers. Institutions also provided additional support for PhD students including increased pastoral care, assistance to modify research plans, online resources, additional equipment, and enhanced access to online training and support.



### SUPPORTING EARLY CAREER RESEARCHERS

The University of Edinburgh used SFC funding to create 40 new Chancellor's Fellowships to protect the very best early career and post-doctoral researchers who would otherwise have been on vulnerable fixed-term contracts. The fellowships will provide career opportunities for talented early career researchers and innovators to develop their careers in a supportive, world-leading environment and training them to take up the full range of core academic activities, including teaching, academic leadership and knowledge exchange. The university is particularly keen to recruit researchers with a focus on any aspect of COVID-19 and its impacts.

The pandemic has been an unprecedented health emergency for Scotland, and all our institutions have played a role in supporting both their local – and global – response and recovery to the virus. Institutions have prioritised research to address the clinical and societal impact of Covid, including pivoting staff and equipment to support the NHS, pump priming promising projects and supporting proposals for additional Covid research, its treatment and impact. For example, the University of St Andrews has used additional SFC funding to work with the University of Dundee and NHS Tayside to investigate the safety and efficacy of a new type of ultraviolet light to safely kill airborne viruses which can cause Covid-19, as well as other diseases such as influenza. Robert Gordon University has used SFC support to 'pump-prime' 12 research projects ranging from virtual law courts, to remote rehabilitation post-surgery, and the impact of the pandemic on support for victims of domestic violence. Queen Margaret University's research investigations include health systems in fragile contexts experiencing violence, conflict, pandemics and other shocks, while the University of Edinburgh is using economic models to develop a clear mapping of the spread of disease in the UK, and make it possible to evaluate the welfare impact of mobility restrictions in the face of a deadly epidemic.



### RESEARCHING THE EFFECTS OF COVID-19

Researchers at the University of Glasgow are currently working on a range of Covid related research projects, including vaccines, testing, treatment, virus behaviour, health complications and the wider effects of the pandemic on society. The MRC-University of Glasgow Centre for Virus Research (CVR) is working in partnership with colleagues across the UK on a range of areas including a new national research project to study the effects of emerging SARS-CoV-2 mutations, COVID-19 drug screening and resistance, and the longer-term health and psychosocial impact of the virus.

In March 2020, the University of Edinburgh Usher Institute played a pivotal role in the formation of the NHS Lothian Covid-19 Research Group to respond to the pandemic. Staff came from across various departments and sites, including infectious diseases, respiratory and emergency medicine and from the Wellcome Trust Research Facilities, to join the research effort, and to set up and run clinical trials.



## RESEARCH EXCELLENCE AND CULTURE

University Outcome Agreements indicate that the pandemic has accelerated the trend of recent years towards more inter- and multi-disciplinary research, with a focus on addressing real world problems such as energy transition. A number of institutions have incentivised this approach with internal grants available to researchers collaborating across subject areas to address global challenges. Inter and multi-disciplinary research activity is also seen as more financially sustainable, and with enhanced collaboration between university (and college) partners helps ensure better alignment with local, regional and national priorities.



### COLLABORATIVE RESEARCH TO ADDRESS GLOBAL CHALLENGES

SRUC has initiated a challenge focussed research portfolio to apply its research expertise to address major societal challenges including food and nutrition security, health, and climate change. SRUC, as Scotland's specialist land-based and natural economy focused institution, has established a number of challenge driven research centres as collaborative research platforms bringing together academic, industry and policy experts to address key global and local challenges. These centres are multi and inter-disciplinary drawing on expertise from across SRUC's academic disciplines, its consultancy arm, and agri and food industry partners from across Scotland. The centres will have strong connections to the Colleges core academic disciplines, and will help shape the next generation of interdisciplinary research leaders and practitioners. The initial focus of these centres will be in five areas: driving data and digital innovation; global climate emergency; safe and improved food; thriving natural capital for Scotland; and future food systems.

Collaboration around research is not something new for our universities and the pandemic has seen long standing partnership and collaborations, including the SFC funded research pooling and innovation centre initiatives, provide a platform allowing institutions to respond quickly and effectively to the many challenges of the pandemic. The sectors commitment and confidence in these partnerships is illustrated by the University of Edinburgh's five joint submissions with SRUC and the universities of Heriot-Watt and St Andrews in the 2021 Research Excellence Framework (REF).

The results of the REF2021 will not be announced until April 2022, but from our review of Outcome Agreements the sector is confident of maintaining and improving on its outstanding performance in REF2014, with institutions investing in new posts, facilities and platforms, and ensuring robust peer review and oversight of their arrangements. In many of our leading research institutions there is also a growing expectation that all the research they undertake should be of an internationally excellent standard.



PHOTO: SCOTLAND'S RURAL COLLEGE



### DEVELOPING RESEARCH SKILLS IN UNDERGRADUATES

In 2020-21 the University of St Andrews introduced Vertically Integrated Project modules into its teaching curriculum. These modules create capacity for students and staff to work together in multidisciplinary and multigenerational teams in ongoing research projects for credit. These projects enable students to develop a range of highly valued transferrable skills such as communication, teamwork, entrepreneurial, creativity, and project management – as well as giving UG students an insight and introduction into live research. Three existing applied research projects have been identified as offering vertically integrated projects for students: 'InGAME' research project funded by the AHRC Creative Economy Programme in partnership with researchers at the universities of Abertay and Dundee; molecular biology for participation in iGEM; a project with Computer Science creating virtual reality exhibits and 3D historical reconstructions for museums and other learning environments.

Another clear theme running through Outcome Agreements has been the strengthening of international collaborations, alliances and networks as our institutions seek to maintain their international profiles and partnerships following the UK's departure from the EU. For example, the University of Dundee is deepening and broadening its relationship with CERN, the European Organization for Nuclear Research, while the University of St Andrews has established new academic partnerships with the University of Bonn in Germany and Emory University in the USA.

Institutions have also highlighted the strong and dynamic relationship between their research and teaching activities, and have sought to ensure their world-leading research informs and permeates their teaching, ensuring that students are exposed to the most up-to-date thinking, ideas, and innovation in their respective disciplines.



## OUTCOMES FOR ECONOMIC RECOVERY AND SOCIAL RENEWAL

### CLIMATE EMERGENCY

All our institutions are signed up to the Universities and Colleges Climate Commitment for Scotland (UCCCfS) to reduce their carbon emissions by at least 80% by 2050. The majority have committed to go much further and faster than this. In response to the Scottish Government declaring a climate emergency in 2019, and against the background of the COP26 UN Climate Change Conference to be held in Glasgow in November 2021, Scotland's colleges have come together to commit to achieving sector-wide net-zero emissions by 2040 or earlier, and embedding environmental sustainability and measurable targets into their institutional strategies. Individual institutions in the university sector have been equally ambitious, with the University of Edinburgh committed to net-zero emissions by 2040, and the University of St Andrews by 2035.



### REDUCING TRAVEL RELATED EMISSIONS

Forth Valley College has reduced its travel related emissions in a number of ways, including increasing its green fleet of electric vehicles to three cars and two vans; and reducing travel by smarter timetabling with staff not timetabled in more than one campus per day; and promoting active and sustainable travel, including making available five e-bikes to staff and students for short term loan. The College has also secured funding to purchase 30 recycled bikes which will be made available to staff and students.

Overall, Scotland's colleges and universities produced 375,160 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) during 2019-20, representing only a 2% reduction (8,894 tonnes) since 2018-19. However, calculated on the same reporting boundaries than previous years, the sectors emissions have reduced by a far more impressive 17%<sup>1</sup>, although some of this reduction is due to the decarbonisation of the UK grid. It will take time before we establish how much of this reduction is due to the enforced lockdown of the sectors' campuses over much of the past year, and how much can be attributed to the steps taken by institutions to reduce their impact on the environment. Nevertheless, EAUC Scotland, the sector body responsible for leading and supporting collaboration on action for sustainability, reports that colleges and universities continue to improve the quality and completeness of their reporting, and now routinely report the impact of their activity beyond the campus, including travel, to give us a more accurate picture of progress in the years ahead.

<sup>1</sup> EAUC-Scotland Public Bodies Climate Change Duties Overview Report



### SUSTAINABLE DEVELOPMENT SOLUTIONS

The University of Strathclyde has established a Centre for Sustainable Development to create an integrated and equitable approach to teaching, research, and innovation. The Centre will co-create solutions with the university's extensive range of global partners across academia, civil society, and the public and private sectors to create real world impact and tackle the United Nations Sustainable Development Goals. The Centre will operate across the university's engineering, science, humanities and business faculties to bring coherence and focus to the University's work within a single strategic approach. The Centre will operate across five key priority areas: education and raising awareness of sustainability issues across its programs; supporting the co-creation, implementation and evaluation of research which supports sustainable development; working with international partners where there are opportunities for educational and research engagement; and sharing knowledge and expertise, and thought leadership to promote promoting dialogue.

The sectors' support for addressing climate change goes beyond efforts to reduce harmful emissions to supporting the United Nations Sustainable Development Goals. College and universities' environmental and sustainability strategies cover the breadth of their activities including: estates and operational issues; multi-disciplinary research to find solutions to energy transition; and embedding sustainable development in the curriculum to ensure that students have the tools to live and work in a way that safeguards the environment. For example, the universities of St Andrews and Strathclyde have secured funding from Scottish Enterprise for the *Translating Hydrogen into Action* project giving companies across the hydrogen supply chain access to specialised manufacturing and testing equipment and advice. West College Scotland are in the third year of their Skills Academy partnership with refurbishment specialists AC Whyte to address skills shortages for insulation specialists, while the University of Edinburgh has secured funding of €10m from the EU Horizon 2020 programme for the ATLAS project to work with 45 international partner institutions to assess the health of the Atlantic Ocean ecosystem. Scotland's colleges and universities are recognised as being at the forefront of sustainability action in the UK education sector, securing 3 of the 6 finalist places in the prestigious Green Gown Awards for Sustainable Institution of the Year 2021, (Forth Valley College, and the universities of Edinburgh and St Andrews).





## INTRODUCING GIRLS TO CAREERS IN SUSTAINABLE ENERGY

North East Scotland College has combined its commitment to diversity and fair access with its support for regional economic development, and energy transition to address climate change. The *Girls in Energy* programme, sponsored by Shell, has worked with c145 female pupils from S3 to S6 over the past year, and has introduced more than 650 girls to engineering – providing pathways to apprenticeships, college, university, and employment as well as offering placements and showcase events. Of those who have been tracked through the programme, more than 75% have pursued engineering after leaving school. The *Girls in Energy* programme is committed to embracing opportunities in energy transition as the region focuses on an exciting low carbon future, including carbon capture and hydrogen technology, giving the engineers of the future a platform to drive positive change with their skill, dedication, and imagination.

## ECONOMIC AND SOCIAL RECOVERY: SKILLS

As well as being part of a significant growth sector in their own right, our colleges and universities are providing learners with the necessary tools to enable our economy and society to recover from the pandemic. Equipping students with the skills and attributes they need to succeed has always been core to the missions of all our institutions. That these skills and attributes align with the needs of employers and the economy is now more important than ever. Our colleges and universities have shown agility, flexibility, and imagination in how they have responded to the pandemic.

Building on our recent investments in Flexible Workforce Development funding for colleges, and Upskilling funding for universities, we have asked our institutions to focus funding from these programmes on prioritising support for those seeking new skills to return to employment, while recognising the specific needs and challenges of their local and regional economies. This funding, allied to an often profound knowledge of their regional and local economies, has enhanced our colleges and universities ability to flex their offer to address the rapidly developing skills needs of different groups of learners and employers.

A strong theme running through Outcome Agreements has been an enhanced focus on digital skills and employment attributes, either embedded in existing programmes, or in dedicated short courses such as West College Scotland's '*Skills boost*'

or Border College's meta-skills short courses in resilience, confidence building and team working for those who are unemployed or are soon to be made redundant. No matter what discipline a student studies, these skills and attributes will enable learners to respond to an ever-changing working environment, and build resilience in the event of future economic or societal shocks. And the pandemic has placed even greater emphasis on the importance of digital skills to almost every part of the economy, a recurring theme in institutions' Outcome Agreements. Other institutions have given greater focus on nurturing entrepreneurial skills amongst their students, particularly those delivering programmes in technology, the creative disciplines, or rural skills, subject areas where a high proportion of graduates start their own enterprises. For example, the Royal Conservatoire of Scotland, Glasgow School of Art and Queen Margaret University have jointly developed and deliver the SHIFT programme, equipping students and recent graduates with the collaborative, practical and business skills needed for dynamic careers in the arts and the creative industries; while Scotland's Rural College and Abertay and Queen Margaret universities have developed the *Thrive* food and drink summer school to teach students how to navigate the innovation ecosystem, think holistically about the entrepreneurial journey and understand the business start-up process.



## BESPOKE UPSKILLING AND RESKILLING PROGRAMMES

The University of Strathclyde has developed an approach to designing and developing bespoke programmes in collaboration with its industry and business partners to better meet their upskilling and reskilling needs. FlexED is an employer-centred approach with a focus on flexibility. The programmes use Strathclyde's existing expertise across a range of disciplines and tailor them to the needs of individual employees, with learning outcome related to relevant professional body competencies. Programmes can be delivered online, blended, face-to-face on campus or in the workplace to suit the needs of employees and employers.



## VIRTUAL PROFESSIONAL TRAINING FOR BUSINESSES

In response to the pandemic Edinburgh College's training and development team developed a suite of virtual professional training products to support business and employees to upskill and reskill. In a matter of weeks the team shifted the delivery of all its existing bespoke training packages online with minimal disruption to training schedules, while introducing a suite on new products.

During the first lockdown in 2020 the College delivered over 100 online training courses to more than 900 delegates, including programmes covering Mental Health and Resilience, Health and Safety and Computing; and Enterprise and Commerce. New programmes to address the immediate impact of the pandemic on businesses were also developed, including Managing Remote Teams, Holding Virtual Meetings and Make Working from Home Work. The College's virtual professional training prospectus enables businesses to identify, adapt and schedule a range of courses to meet their bespoke training requirements.



## MEETING THE SKILLS NEEDS OF EMPLOYERS

In June 2020 Edinburgh, Fife, Forth Valley and West Lothian Colleges formed a partnership to develop a multi-region response to economic recovery. The East Central Scotland College Collaboration as it is now known has created a range of reskilling and upskilling opportunities for individuals and employers. Supported with funding from the Young Persons' Guarantee and National Transition Training Fund, each college has developed a comprehensive skills programme – including Accelerator and Skills Boost Academies – designed to help meet the skills needs of their communities. Courses have been developed in response to labour market information, unemployment rates, levels of furlough, growth sectors and the local knowledge that each college has of its region, with course options range from HNCs taught over six months, to shorter qualifications taught over two to twelve weeks. New short training courses through Skills Boost Academies will help people develop skills to get into in jobs in a range of industry sectors while the Accelerator Higher National Certificates (HNC) will offer accelerated versions of existing qualifications in areas such as business, computing and care.



Colleges and universities have used their knowledge of local employment markets and extensive employer networks to support learners into work. For example, Dundee and Angus College has reviewed its curriculum, drawing heavily on the most up-to-date labour market intelligence and regional skills assessments,

to better support emerging regional specialisms such as cyber security and digital marketing. In the university sector the University of Aberdeen has introduced a Regional Engagement Group to enhance its understanding of local business and industry skills needs.



## DEVELOPING DIGITAL, EMPLOYABILITY AND ENTERPRISE SKILLS

The University of Aberdeen's iDEA programme helps individuals looking for work to develop digital, enterprise and employability skills for free. Through a series of online challenges and events, students earn career and life enhancing badges, unlock new opportunities and, ultimately, gain industry recognised awards that help their employment prospects. Learners on the programme include apprentices, business leaders, pensioners, students and community groups. The challenges are split into core categories, each with its own series of badges to be won - citizen, worker, maker, entrepreneur and gamer. These badges help learners demonstrate what they have learned and what they could do in the workplace.

Other institutions have scaled up provision of programmes and short courses critical to addressing the impact of the pandemic, such as the health and care provision, (see public health emergency below). However, the pandemic's impact on face-to-face and work place learning highlighted earlier in this review has led to some institutions noting significant challenges around employers' willingness to recruit students to apprenticeship programmes. This has led to

some institutions, including Fife College, to enhance recruitment to new and existing pre-apprenticeship programmes that will allow students to switch to a full apprenticeship in due course. Addressing the same challenges of providing in work learning opportunities, Heriot-Watt University launched the *Future Made for Success* programme giving post-graduate students access to virtual placements.



## INTEGRATING DIGITAL SKILLS IN THE CARE SECTOR

Forth Valley College (FVC) has developed a new Digital Health and Care Induction Standards online course that will enhance opportunities for care service users to engage with digital technologies. A joint partnership between FVC, Time for You Care, Able Health Care, Clackmannanshire and Stirling Health and Social Care Partnership and Falkirk Health and Social Care Partnership, the new course aims to ensure that digital skills are integrated into the training of care staff across the Forth Valley area to meet the demands of a changing sector. With investment from SFC's College Innovation Fund, the course will establish digital health and care as a key learning priority for staff, and has the potential to reach 3,200 'care at home' staff who are currently employed across the Forth Valley region. The course ensures that digital skills are integrated into the training of care staff across the Forth Valley area to meet the demands of a sector irrevocably changed by the pandemic.

## ECONOMIC AND SOCIAL RECOVERY: INNOVATION AND BUSINESS SUPPORT

Scotland's colleges and universities play a critical role in Scotland's innovation landscape, with their learning and research generating new ideas, products and processes to support business recover, grow and remain competitive. Through our respective College and University innovation funds SFC has incentivised a collaborative and joined up approach to fully utilising Scotland's research base, networks and know-how to anticipate and respond to the needs of businesses both regionally and nationally.

Universities and colleges have developed approaches to innovation and knowledge exchange that, while based on their own specialisms, missions and regional economies, add up to a coherent whole that supports nationally agreed outcomes. This gives the sectors' support for business a richness and diversity that mirrors that of the economy. For example, the Robert Gordon University's new National Subsea Centre will, following significant investment from industry partners, deliver subsea research and development to meet challenges in subsea engineering for the oil and gas industry, and the emerging marine renewables sector. Through the Edinburgh Regional Growth deal, the Data-Driven Innovation initiative (DDI) has created five hubs based at Heriot-Watt and Edinburgh universities to provide expertise and facilities to help businesses become more innovative through data – including the National Robotarium, co-locating researchers, engineers, and entrepreneurs to generate new smart robotics companies.



## USING COLLEGE EXPERTISE TO SUPPORT BIODIVERSITY AND ENTERPRISE

In December 2020 the City of Glasgow College (CGC) and water technology start-up Altitude Thinking secured funding of £23.5k from the sensor and imaging innovation centre (CENSIS) to support the development of a mobile device to read and analyse the quality of water and address marine pollution. The new drone will be remotely operated on the surface of rivers, canals or lochs to monitor water quality.

The award builds on an initial investment through the SFC Innovation Voucher scheme that allowed Altitude Thinking – founded by CGC engineering graduate Dale Colley – to access the College's expertise in nautical studies, engineering and maritime studies to build and test prototype drones with Scottish Canals. Alongside support for enterprise and the potential for creating high-value jobs, the collaboration helps secure the health of Scotland's rivers, canals and waterways, essential natural assets that enhance Scotland's biodiversity and support our tourism and aquaculture industries.





## INNOVATION SUPPORT FOR RURAL BUSINESSES

A suite of new diagnostics and laboratory tests will help rural businesses mitigate losses from animal diseases through early and simplified testing. The *Orchard* programme at Scotland's Rural College (SRUC) supports staff across the College to develop commercial testing and other services that will support rural businesses. Working across the animal supply chain, SRUC are also developing a tool to quantify animal welfare standards that will be available for use by supermarkets and others food and agri businesses. SRUC has developed on-line training material using new techniques to optimise delivery and impact on high welfare practice on farms with students able to benefit from novel training content which engages them in impactful behaviour change concepts.

While our colleges do not themselves undertake research, they do offer a range of business support and innovative practice that, when allied to their unique specialism and extensive local SME networks, gives them the ability to respond quickly to the developing needs of businesses and public services. To support this approach, the Scottish Government has invested £500k in seven local college-led innovation partnerships, including engineering for the future (West College Scotland), digital health skills (Forth Valley College), boat building and repair (Borders College), and precision farming (Dundee and Angus College). Our review of coherence and sustainability highlights the

opportunity of bringing greater alignment to our support for innovation in the college and university sectors to enhance their collective contribution to Scotland's economy. The potential of this approach is shown by our tertiary institutions, SRUC and UHI, who are able to apply their world leading research through their extensive local SMEs and micro-businesses networks. The UHI West Highland College Advanced Manufacturing Centre in Fort William, for example, will give local businesses access to new advanced manufacturing equipment and specialist expertise to help inform the adoption of new technology and processes.

## RESPONSIVE AND COLLABORATIVE

### PUBLIC HEALTH EMERGENCY

Our colleges and universities have been agile in their response to the health crisis, supporting essential services, keeping their students and staff safe, and – as we have explored earlier in this document – prioritising their research to address the clinical and societal impact of Covid. Perhaps, however, the greatest and most immediate impact has been the front-line support for our under-pressure health services provided by hundreds of student nurses, including 300 from the University of Dundee, 430 from Napier University, and 500 from Glasgow Caledonian University. Around 1,200 student nurses and midwives from the University of the West of Scotland, as well as some applied biomedical science students, volunteered to work in hospitals across Scotland during the pandemic, putting their clinical skills at the disposal of the NHS.

“This year the COVID-19 pandemic has had an unprecedented impact on us all, and we are extremely grateful to our highly skilled nursing students who stepped up in an hour of need. Your extraordinary hard work, dedication, skills and commitment helped pull our health service through an exceptional time.”

NICOLA STURGEON  
First Minister, December 2020

Colleges and universities have also provided essential equipment, facilities and capacity to the NHS. SRUC, for example, has worked with the Moredun Research Institute to provide extra testing capacity to the NHS. Both institutions have repurposed specialist staff, laboratory space and equipment normally used for delivering diagnostics for livestock to provide capacity for around 1,000 covid tests a day, while 25 scientists from the University of Edinburgh (chosen from 750 volunteers) have helped NHS Lothian deliver 1,000 covid tests per day at its Institute of Genetics and Molecular Medicine. Institutions have also donated essential equipment and supplies to health and care facilities, including SRUC's donation of personal protective equipment to care homes and NHS facilities across Scotland, and a ventilator from Napier University's Simulation and Clinical Skills Centre to Edinburgh's Royal Infirmary.

Universities and colleges have made student safety their number one priority during the pandemic, and have taken extensive measures to protect their health. We have explored above the unprecedented pivot to online and digital learning to deliver programmes and student support services, as campuses across the country closed their doors. Most colleges

and universities also report enhanced partnership working with staff unions and student associations, as well as external agencies such as local health trusts, to quickly respond to the most recent health advice, ensuring that as campuses reopen appropriate safety procedures and hygiene regimes are in place. Institutions have also ensured that health advice and guidance, on campus testing, and latterly, vaccination facilities are widely available and accessible to students and staff. Most universities provided free accommodation to students arriving from outside the UK, or from 'hotspots' in the UK, before the start of the 2020-21 academic year to allow them to safely quarantine. And as our campuses open up again, the sectors have placed greater stress on personal responsibility, with the majority of institutions asking staff and students to sign up to a pledge or charter with respect to safe behaviours and responsibilities.

Alongside the range of Mental Health and Wellbeing support highlighted earlier in this document, the Outcome Agreements bring into focus the vital role that key communication channels have played

in keeping students and staff informed throughout the crisis, and how they have offered a lifeline to those feeling isolated, including the more frequent use of surveys to ensure the concerns of staff and students are captured. Student associations have also played an important role in providing practical support for those seeking wellbeing advice and guidance on hardship support, as well as providing Covid safe events and activities to keep students connected.

## COLLABORATION

In this document we have highlighted a range of existing and new collaborations between institutions, particularly around the areas of student transitions, fair access and research, where partnership working has become an embedded characteristic of how our institutions operate. As highlighted above, the immediate response to the pandemic has also been the catalyst for enhanced partnership working, as have structural investments such as the 'city deal' regional economic growth initiatives.

To realise our vision for a more coherent and integrated tertiary education system set out in our review of coherence and sustainability, SFC is committed to establishing regional Tertiary Provision Pathfinders to better explore strategic planning and partnership working at a regional level, and to better meet the needs of students, employers and broader economic and social drivers. In their Outcome Agreements almost all of our colleges and universities have outlined examples of how enhanced collaboration might work in practice across the sectors in a wide range of areas, including: the co-design and delivery of courses; marketing and recruitment; shared business links and networks; shared facilities; and fair access initiatives to give only a few examples.



## NEW PROJECT AIMS TO SUPPORT MENTAL HEALTH OF NHS WORKERS

During the early stages of the pandemic the University of the Highlands and Islands (UHI) successfully secured £45k of Scottish Government funding to lead new research on how digital technologies can help NHS Highland health and social care staff cope with the impact of the pandemic. The project explores how digital technologies can help prevent and treat psychological distress and enhance the resilience of health and care workers. Participants in the study work with UHI researchers to create personalised mental health toolkits. Their mood and anxiety levels are monitored using an app, with those identified as struggling receiving personalised feedback and support. Building on this investment UHI's rural health and wellbeing team are looking to secure support to work with other groups in rural areas who may be particularly vulnerable, such as young people and those living with long-term conditions.



PHOTO: EDINBURGH NAPIER UNIVERSITY





## REGIONAL COLLABORATION SUPPORTING ECONOMIC GROWTH

Regional collaboration in Ayrshire is a typical example of how our colleges and universities have been working together to support economic growth, civic responsibility and inclusion. The University of the West of Scotland (UWS) and Ayrshire College are strategic partners in the Ayrshire Growth Deal, supporting investment of over £251m in the economic infrastructure of the region. As part the growth deal they are also partners, with Glasgow and Strathclyde universities, in the new Aerospace and Space Innovation Centre (ASIC) created to drive new technologies and skills, positioning Ayrshire and Scotland as a hub of aerospace and space technology.

The two institutions are also lead members of the Ayrshire Skills Group – together with SFC, SDS and the regions local authorities and employer groups – working in partnership to identify the current and long-term skills needs of the region and jointly develop and implement a regional skills investment plan. Building on their strong articulation links, the university and college are exploring immediate, medium and long-term skills needs in the region and, given the adjacent locations of each campus, have explored opportunities for effective sharing of space to maximise the impact for students in the region.

The partnership approach extends beyond academia and onto the sports field. The ambitious collaboration between UWS, Ayr Rugby and the Ayr Community Rugby Trust sees the club further strengthen its relationship with the university enabling both parties to focus resources across a number of high priority areas including education, research, squad development, coaching and community inclusion. The University is partnering South Ayrshire Council in development of new sports facilities adjacent to the campus and has worked with the Council over recent years to facilitate development of the new Ayr Academy.

When we add to cross-sector partnerships, our college and universities' engagements with local authorities, health trusts, businesses, skills and enterprise agencies, and third sector and voluntary bodies, we can see that our institutions are critical hubs in a series of complex and overlapping ecosystems. For example the University of Glasgow's bridging and pre-entry programmes are delivered in partnership with other colleges and university partners, 160 schools, 14 local authorities, as well as third sector organisations including Who Cares? Scotland, and MCR Pathways, while the Edinburgh based Hub for SUCCESS initiative, set up to support educational progress for those from care-experienced backgrounds, is a partnership of five universities and two colleges alongside the local authority and care agencies.

A large element of curriculum-focussed collaboration centres on responding to the needs of the health and social care sectors, or responding directly to regional skills need. An increased use of ICT and online and digital learning has also enabled the development of more collaborative opportunities. Collaboration focussed on the development of seamless learner pathways is also a common feature of this year's Outcome Agreements, with many colleges describing the work they are doing with partners to improve curriculum pathways in response to local need. Again, the increased prevalence of online learning has removed some barriers to collaboration and delivery that may have existed in the past, with examples including a new online degree pathway between West Lothian College and Napier University that will allow business management students to progress to an online degree without the need to travel to university, and with pastoral care provided by the college. Newbattle Abbey College are also developing a HNC in Childhood Practice with Outdoor Learning with Queen Margaret University, and a HNC Working with Communities with the University of Edinburgh – providing pathways from their Preparation for FE course through to university.



## INTEGRATED TERTIARY EDUCATION

The North East is one region that has already made significant steps toward creating an integrated tertiary education system, with the Robert Gordon University and North East College Scotland building on longstanding relationship to develop more than 40 learner pathways facilitated by a joint strategy and delivery board.

Other collaborations, not necessarily in response to the pandemic, have focussed on the delivery of specific provision, or responding to the needs of specific sectors, with examples including the development of the Campus for Advanced Manufacturing and Technologies Initiative at Fife College in collaboration with Edinburgh and Strathclyde universities, Babcock International, the leading engineering and defence company, and the National Manufacturing Institute Scotland (NMIS), amongst others.



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