

Employer-university collaboration



From fixes to foresight: Jisc and Emerge Education insights for universities and startups

At Jisc and Emerge Education, we believe that education technology (edtech) has rich potential to help UK universities solve their biggest challenges. We see edtech startups as key to the innovation and agility that higher education needs to navigate the rapidly changing present and future. This is a critical part of building a sector that is resilient to unforeseen changes and that can further transform using advanced technologies, as part of our vision for an Education 4.0.

We have worked as close partners for several years and our collaboration brings together Jisc's 30+ years of experience in providing digital solutions for UK education and research, and Emerge's in-depth knowledge of the edtech ecosystem based on investments in 55 startups in five years. Together, we've developed unique insights into the potential of edtech in higher education.

To unlock that potential, we're undertaking a programme of research. It's focused on exploring the most urgent priorities that university senior leaders will face over the next three years, which we investigated and set out in our initial joint report, [The start of something big?](#) Can edtech startups solve the biggest challenges faced by UK universities?

Priority one

Delivering the best, most equitable student experience.

Priority two

Adapting to student evolving expectations about employability and career outcomes.

Priority three

Expanding the university's reach by attracting more (and more diverse) students.

Priority four

Transforming digital and physical infrastructure.

Priority five

Recruiting, retaining and developing world-class staff.

Each report in this series explores aspects of each priority in more detail, mapping current approaches and challenges, and highlighting specific edtech solutions and startups. The reports draw on the expertise of leaders from HE, employers and startups, through Jisc – Emerge Education advisory groups on specific topics, including the future of assessment, the employability journey of students from non-traditional backgrounds, student recruitment in challenging times, employer-university collaboration and the student mental health and wellbeing challenge.

We find that there are plenty of opportunities for startups to hear from each other but very few for them to hear from real customers – universities – and understand in depth the priorities they have and the problems they are facing. This report series does that, providing startups with the information they need to shape their products so as to ensure they meet university needs. For universities, the series offers insights into how the sector is managing change as well the possibilities for the future.

The work on the reports was well underway when the Covid-19 pandemic hit, and we have seen the university sector adapt more rapidly than many thought possible to the challenges of digital delivery. But in the midst of crisis, it is important to draw a clear line between our immediate response and what it tells us about the future. This work is part of [Learning and teaching reimagined](#), a sector-wide initiative focused on providing university leaders with inspiration on what the future might hold for higher education, and guidance on how to respond and thrive in those environments.

Ultimately, we want to build a vibrant, highly effective edtech ecosystem, with seamless collaboration between universities and leading startups, to ensure students get the educational experience they deserve.



Paul Feldman
CEO, Jisc



Nic Newman
Partner,
Emerge Education

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“There has been significant focus from policymakers over many years in relation to the widening access and participation agenda, ensuring higher education is open to all with the potential to get there, but it is striking how there has been far less attention on the other end of the pipeline as to how we can best ensure that there is effective connecting of our talented graduates with the opportunities that lie beyond their time at university.

It means understanding how to build strategic relationships between employers and universities has never been more important – even more so in a post-Covid world. I welcome fresh ideas and innovative thinking that can further set out some clear approaches to unlock success in this critical area.”

Rt Hon Justine Greening, co-founder, Social Mobility Pledge, and former secretary of state for Education and minister for Women and Equalities

“We welcome the Employer University Collaboration report, which will help to build collaboration between FE providers, HE providers and employers. Within our reforms to date, and those forthcoming, we want to develop this relationship. We are setting up 20 employer-led Institutes of Technology and we are investing in bootcamps, with initial ones for digital skills being set up across the country and led by local employers.

The Lifelong Loan Entitlement, announced as part of the Prime Minister’s Lifetime Skills Guarantee, will make it easier for adults and young people to study more flexibly - allowing them to space out their studies across their lifetimes, transfer credits between colleges and universities, and enable more part-time study. Strong partnership between providers and employers will be pivotal to delivering this entitlement, and giving people opportunities to train, retrain, and upskill to develop the skills needed by local and regional economies.”



Department
for Education

Paul Kett, director general
at Department for Education

Foreword

The global labour deficit is projected to reach \$8.5 trillion by 2030, and given the size and wicked nature of this problem, neither universities nor employers will be able to solve this alone. Rather, by combining the unique strengths of universities and employers at scale, there is significant potential for delivering up-to-date and industry-relevant education for all learners to ultimately close the skills gap.

Traditional models of employer-university collaboration (EUC) that are focused on skills and employability have failed to scale but we believe the emergence of new technology platforms will help to address existing challenges to mass EUC. The need for addressing these challenges at speed and scale is now required more than ever, as a result of Covid-19, with job vacancies at 50% of their pre-pandemic levels.

This report, developed through the EUC action group of 30+ university and employer leaders, emphasises the importance of higher education (HE) and industry coming together to meet both the job needs of individuals and the talent needs of employers. In partnership with Jisc, Emerge Education and Riipen, we have developed this green paper to provide:

A long-term vision for employer-university collaboration in 2030 and the foundations that must be laid in the short-term to enable this vision
Practical guidance for universities and employers on the key barriers that need to be overcome and leading solutions for implementing employer-university collaboration at scale

Impactful case studies that provide real-life examples and key learnings for senior leaders across HE and industry:

In this report, we've highlighted some of the leading examples of innovators, from the University of Stirling and Coventry University, through to global technology companies such as Salesforce, and regional manufacturing leaders such as Pittards. Through the diversity and quality of these real-life case studies, we hope to provide not just a future-focused vision, but also tangible next steps that can be taken by senior leaders to enable employer-university collaboration at scale.

We hope that universities and edtech startups, policymakers and innovators alike will find this report stimulating and useful as we move towards a world with more impactful, scalable and technology-enabled EUC.



Nick Petford

Vice-chancellor at the University of Northampton and chair of the Emerge Education action group on employer-university collaboration

PART 1: The importance of employer-university collaboration (EUC)

Introduction

By 2030, the global labour deficit is projected to reach \$8.5 trillion¹. The world of work is changing at an unprecedented rate and 1.2 billion employees worldwide will be affected by automation technologies over the coming decade.

The impact will be felt across all age cohorts: young graduates as well as workers in need of reskilling and upskilling. One way in which the traditional university system is responding to this challenge is by working closely with employers to adapt their offerings in line with the rapidly changing employability needs of students and talent needs of industry. However, these efforts are often limited by two particular obstacles: speed and scale.

Universities, as we know them, were not, in the main, set up to adapt their course offerings at the same pace as employer needs are changing today. They often move slowly and at times can struggle to keep up, making limited changes to the courses they offer. For example, it often takes more than 18 months to develop a new undergraduate course, and the typical refresh cycle for courses is close to five years. This is compounded by regulatory challenges and by the speed of professional, statutory and regulatory bodies (PSRBs), whose accreditation is needed for many courses. This latter challenge was felt particularly acutely during the rapid shift to digital assessment in the spring of 2020.

Nonetheless, some universities are leading the way. At the University of Northampton, the Institute for Creative Leather Technologies builds on local strengths in leather manufacturing and offers a mixed portfolio curriculum that includes a three-year BSc in leather technology as well as a 'top up' BSc for industry professionals. The University of Southampton is adapting existing modules to include real-world projects with employers, delivered through the Riipen digital platform, offering 350 project experiences to undergraduate and postgraduate students and doubling the number of employers year on year. In Sheffield, the RISE programme sees two local universities work with the local authority to collaborate with hundreds of SMEs in the region, opening up access to graduate talent for businesses that traditionally struggle to engage with higher education institutions. Another local initiative is run by the University of Stirling, which uses funding secured as part of a city region deal to co-design new skills pathways

¹The *Global Talent Crunch* (Korn Ferry, 2018). The figure refers to unrealised revenue, including \$408b in the UK alone.

with employers, as well as four integrated degree programmes tailored to meet skills deficits that have been identified by key sectors within Scotland. Finally, Coventry University has partnered with FutureLearn, a massive open online course (mooc) platform created by the Open University, to launch credit-bearing microcredential courses. They are working with FourthRev, a new startup, to provide short courses for students that give them an academic credential and a digital industry certification.

With examples like these at the forefront of practice, it is clear that collaboration between universities and employers can play a key role in tackling the skills gap. By combining the unique strengths of each, there is significant potential for delivering up-to-date and industry-relevant education for learners across all demographics. Both universities and employers have unique strengths across each of the four steps in the education value chain.

	1. Student acquisition	2. Course design	3. Course delivery	4. Student success
+ University strengths	Establishing brands and strong capability for marketing to 16-18 year olds.	Strong pedagogical expertise and stringent quality assurance.	Academic rigour and strong theoretical underpinnings.	Recognised HE accreditation.
Employer strengths	Direct access to employed adult learners eager to up- and re-skill.	Up-to-date understanding of industry needs.	Plenty of real world projects to use.	Open vacancies for placements.
= Value of partnering	Just in time education for everyone.	Up-to-date and industry-relevant courses.	Right mix of theoretical and applied.	Empowered learning and career choices.

Universities bring to the table extensive pedagogical expertise and robust quality assurance processes, while employers offer the opportunity for learners to access first-hand insights into the workplace. Together, they can create a powerful education experience that directly meets the evolving needs of both individuals and employers.

The changing world of employer-university collaboration

“It has become increasingly clear in recent years that the economy will benefit most when education providers and industry work together to develop the workforce.”

Nick Petford, vice-chancellor at the University of Northampton

We believe that a key solution to the widening skills gap is **technology-enabled mass employer-university collaboration (EUC)**.

Meeting the coming wave of demand will require building on existing approaches and ensuring they deliver good outcomes for students, employers and education providers. Through market research and interviews, we have identified four specific areas of employer-university collaboration that can be scaled effectively and rapidly, thanks to emerging trends in the use of technology.

In all four of those areas, we can point to examples of universities and employers working together well without a significant technology component – and these models can be highly impactful. However, without technology, they are often difficult to scale across large numbers of universities and employers. And, as we have seen, the size of the challenge ahead demands a scalable response.

*The size of the challenge ahead
demands a scalable response.*

1

Course co-creation and co-delivery

Courses can be designed and delivered in partnership by universities and employers (or professional bodies representing employers). In the current model, one could point to medical and health science degrees as well as a whole range of courses validated by PSRBs. Outside this category, collaboration with employers on course content has often been piecemeal, with individual faculties or lecturers engaging employers directly. The benefits of course co-creation and co-delivery are thus limited to a small number of disciplines.

Direction of travel: technology startups such as Fourthrev are building courses with industry, particularly in high-growth industries such as IT, then partnering with universities to validate and deliver these courses. Marketplaces such as FutureLearn are increasingly helping universities to market such courses. These courses often carry both an industry and a university credential and are thus doubly attractive to students.

2

Experiential learning

This involves students going into the workplace as part of their studies or using highly realistic simulated experiences to learn key professional skills. For some degrees, such as teacher training, this is a professional requirement. In other cases, most – perhaps all – universities in the UK offer placements or internships, with varying degrees of support for students in connecting with the employers. The placements may or may not be compulsory and may or may not count towards their degree. As a result, the benefits of experiential learning are not distributed evenly, as access depends on students' own awareness of their importance and availability of time and resources to engage in these activities. In the worst-case scenario, this may contribute to a lack of equity in outcomes (for example, access to placements may reflect a student's family network).

Direction of travel: employers and universities are working together to provide universal access to experiential learning for students through projects and internships that are clearly linked to course work and are, in many cases, credit-bearing. One example of this is the apprenticeship model, with a growing number of these degrees delivered by universities. This approach has significant political support, and a strong incentive for employers to fund places, but faces the same scalability challenges as the traditional models of EUC. Another example is emerging technology companies such as Riipen, which aggregate micro-internships at scale and enable university instructors to integrate these into existing courses as credit-bearing activities.

3

Career navigation and application support

University career centres face a challenge around the number of employers the university is able to engage with, which is limited by the resources available to the careers centre. Employers' recruitment teams are also resource-constrained so many end up engaging with a relatively small number of HEIs (23 on average according to an ISE survey), which tend to cluster around the top of university rankings. The other challenge is the ability to engage students at the right time. When employability activities are not embedded in the curriculum, this type of support is 'opt-in', requiring the student to take active steps to benefit from the service. This can be particularly difficult for students from underrepresented backgrounds.

Direction of travel: third-party companies such as Handshake and GTI allow individual universities to connect simultaneously with thousands of employers and vice versa. This enables university students and recent graduates to benefit from personalised job recommendations and clear signposting to relevant career opportunities, while freeing up the time of career services staff to focus on identifying students most likely to benefit from personalised, hands-on support.

4

Education as a work benefit

In what is becoming a well-established trend, particularly in the United States, employers provide employees with a discretionary professional development budget or a tuition reimbursement scheme for a specific set of courses delivered, in many cases, by universities. One well-publicised example of this was the partnership between Starbucks and Arizona State University. As that example shows, the current approach favours bespoke, one-to-one partnerships. At the same time, the take up of these schemes remains relatively low – as a recent Boston Consulting Group report noted, “although 60% of the firms we studied offer some form of tuition assistance, only 2% to 5% of eligible employees participate.”

Direction of travel: as competition for talent grows, employers are taking a much more active role in providing financing for, and helping workers to choose, university programmes that could improve their career prospects. In order to meet employee needs, employers need to provide much greater flexibility in the choice of course and provider, fuelling a shift to one-to-many relationships. To enable this, technology platforms such as Guild Education aggregate university courses, coach workers through course selection and completion, and provide analytics to the employer. This model enables universities to reach larger numbers of learners and, in the case of Guild, employers generate cost savings of \$2.44 for every dollar spent on education.

² 'Inside student recruitment 2019: Findings of the ISE recruitment survey.' (Institute of Student Employers, 2019) ³Call for a New Era of Higher Ed–Employer Collaboration

Emerging best practice

As the above examples show, employer-university collaboration offers significant opportunities for innovation to both sides. In order to better understand emerging trends and to provide inspiration to universities and employers wishing to make the most of these opportunities, we have collected examples of best practice from across the UK sector.

CASE STUDY

University of Northampton and Pittards

What is the EUC offer for learners?

The Institute for Creative Leather Technologies (ICLT) is a globally unique research centre based at the University of Northampton, that showcases the different angles from which the university approaches collaborations with employers.

Built to use long-standing industry connections, the institute emphasises applied science in its undergraduate and postgraduate courses while also conducting research that responds to the scientific and technological needs of the automotive, fashion, footwear and allied industries. The institute partners with sector bodies such as The Worshipful Company of Leathersellers, The Worshipful Company of Girdlers and Leather UK to aggregate industry connections at scale and provide a locus for Northampton to clearly articulate the value proposition of employer-university

collaboration to external partners as well as learners.

Rachel Garwood, the institute's director, acknowledges that leather is *"a niche subject within higher education with relatively small student cohorts, so as a result we engage heavily in outreach activities to increase our profile and encourage students to choose leather as a career path."* This awareness inspired several strategies that embed industry values at the core of the institute's ethos, *"enriching our curriculum by integrating our students, from day one, with industry."*

One innovation has been offering a mixed portfolio curriculum, so that Northampton can also deliver training courses, which are key in upskilling existing workforce. Alongside the traditional three-year BSc in Leather Technology, the institute also supports a 'top up' BSc for those who already have some experience or qualifications

in the industry plus Certificates and Diplomas of Higher Education at both undergraduate and postgraduate level. Garwood explains that Northampton's one year master's degree in Leather Technology (Professional) is structured in such a way that all the theoretical learning and practical experience in the tannery and labs can be delivered in an intense burst in the first three months.

Learners then spend the next three months writing assignments and the final six months embedded within their own company, as full-time students, conducting research and writing their dissertation. Garwood explains that *"one benefit of this structure is that the first three months can be promoted as a training course for industry employees, providing extra revenue and adding to the student experience by increasing the diversity of people on the course."*

By converting to this novel mode of delivery, the MSc course becomes a multi product which increases its accessibility to a wider audience. What is the scale of the partnership? Leather has small student cohorts at undergraduate level – typically 20-25 per year. In 2019/20, two key global industry brands, Ecco and Henan Prosper, sponsored ten students to attend the three month training course as part of their continuing personal development programme in the workplace. In 2019, the institute moved to a new

site, at a cost of £5.5m, which enabled it to use university estates to encourage further interaction with employers.

"We now have facilities we can rent out to third parties," explains Garwood, enabling them to carry out confidential research with access to academics and specialist university facilities (tannery and labs).

What are the outcomes for:

• Learners

Northampton's industry connections provide students with invaluable networking opportunities throughout their degree. *"Once our students graduate,"* says Garwood, *"they're very au fait with the commercial industry, on a global scale."* This has ensured strong employability outcomes. *"We often see 100% employability of our graduates,"* states Garwood. Industry actively headhunts Northampton graduates: Ecco regularly takes ICLT's top home/EU students.

It's not easy for the ICLT to guarantee internships or offer a formal year in industry because some students come from family businesses and can't be placed in other tanneries for confidentiality reasons. But it does offer hands-on, experiential learning, working across supply chains, and substantial international engagement

Once our students graduate, they're very au fait with the commercial industry, on a global scale. We often see 100% employability of our graduates.

opportunities. Often, companies will take students on work experience and will fund accommodation and living costs; the chemical company TFL in northern Italy hosts Northampton's first year leather students for one week, paying for the accommodation and offering workshops within its facilities; students are also introduced to machinery and manufacturers in that area for leather production.

Northampton also coordinates an active leather alumni network, called the Corium Club. *"A lot of our alumni are now key industry members," says Garwood, "so that keeps industry in contact with current students. Every year, we sponsor five students to attend the APLF leather fair in Hong Kong, where we have a Corium Club reunion and those students can network with industry. Sometimes they are even interviewed during the show and offered jobs."*

We have to market ourselves. We have to sell ourselves. We have to make sure we're very closely aligned to industry needs.

• Universities

One of the big challenges for Northampton is finding new students, *"because few youngsters these days think about studying leather in higher education,"* says Garwood. *"So we have to market ourselves. We have to sell ourselves. We have to make sure we're very closely aligned to industry needs."* This has become fundamental to the university's brand differentiation, which has used the skills needs of the local

economy to position the university as a global expert in this specific niche. Northampton is the only university in the UK to offer a degree in leather.

Structuring its higher education programmes so that industry employees can *"hop in and out,"* as Garwood puts it, using parts of their curriculum as training courses, aggregates demand to make the courses more economically viable and has provided Northampton with new sources of revenue. Another potential income stream is research. For a fee, tanneries or chemical companies can approach the institute to collaborate on confidential single client research projects, where the company owns the results. In some cases, by agreement from the company, academics can produce related publications.

Northampton also partners with industry to reinforce its academic quality control. Once a year, the Technical Liaison Group interviews learners anonymously, to ask for their feedback on course delivery and university facilities. This then feeds into the Leather Industry Advisory Committee (LIAC), chaired by Reg Hankey, CEO at Pittards plc, which ensures that the university's courses are aligned with industry goals. Garwood explains that *"they look at what we're doing, identify any gaps and give us ideas and suggestions,"* which keeps their learning outcomes up to date and aligned with industry.

• Employers

Co-delivery of workshops with the university enables employers to engage the most talented graduates before they leave university. *"The two-way benefit there,"* explains Garwood, *"is they come to promote their chemicals or products, and do a workshop which gives that*

commercial edge and vision to the science and technology that we're delivering. But they're also looking at the students and spotting any talent coming through that they might want to employ at some point in the future."

The input employers have, via the LIAC, into course content should also swiftly address any sector skills gaps and improve the quality of talent at entry level, because employers are shaping their skills base from earlier on in the pipeline. This should, in turn, create cost savings down the line, as less training is needed once graduates enter the workforce.

Employers are shaping their skills base from earlier on in the pipeline.

Where upskilling is required, companies can make use of the university's expertise in pedagogy to provide effective learning for their employees, meaning there is less need to piece together in-house training programmes. For Hankey, from an employer's perspective *"the flexibility of modules is important because you've got to have mix-and-match courses, or more modular type courses, whereby if students can only come in for so many modules, they can have different levels of certification."*

The advantage of learners returning to their companies to complete extended research projects is a potential injection of fresh thinking, says Hankey, *"so the company actually gets some really worthwhile research carried out that contributes then towards their master's."*

Research, as much as teaching and learning, is at the fore of Northampton's collaboration with Pittards. Hankey foresees *"a whole new future of employer-university collaboration based on academic research that takes it into a different direction."*

For Hankey, "leather is about biochemistry; it's a collagen matrix, the most complex biochemistry that anyone knows about, and collagen goes into all sorts of things, from beauty and healthcare to gelatin. We're a byproduct of the meat industry, but at what point could you grow synthetic collagen in a laboratory?" Hankey suggests that *"we're not very far away from that"* vision, but *"we need to link pure research, academic and practical tanners together. That's going to come from links between manufacturing and universities, because manufacturing can't do it on its own; it hasn't got enough access to the pure academic knowledge."*

What role has technology played in scaling this impact?

"We teach using classrooms, a small tannery and laboratories, so we have quite high overheads," says Garwood. Covid-19 has transferred some teaching online and this has also proved to him *"that we can still have a close relationship with industry online."* Northampton has begun delivering workshops remotely, where the lecturer delivered the practical work in the tannery and *"in between certain steps, they went back into the classroom and had a live online presentation from the company whose chemicals we were using."* In the first year of undergraduate study 2020/21, 50% of the course will involve face-to-face teaching and 50%

will be delivered online. *“Our courses have got a high practical loading and we can’t deliver the tannery, the hands-on making leather in our factory, or the chemical testing in the laboratory, online. But so far it has been working extremely well.”* The ICLT has further enriched its online delivery to students by offering a one-hour weekly slot to industry members, giving them the opportunity to present anything leather-related. *“This is an ideal forum to encourage discussions and debates, often on a global level,”* says Garwood.

The next step, for Garwood, during this period of remote learning, is *“people are requesting a lower level of delivery online, which is the next step we have addressed. We will be*

launching over the next few weeks a twelve-week, level three online course on the foundations of leather manufacture. This will consist of weekly 90 minute lectures and aimed at all sectors of the leather value chain.”

Garwood thinks that *“any academic course that’s closely linked to industry can only have benefits, because it’s really important that graduates have all the skills necessary to hit the ground running. We have to listen and respond. We have two customers: students, of course, but industry is also a customer, because we are supplying them with future generations of the workforce. It’s important that we, as academics, do not lose sight of that commercial vision and application.”*

CASE STUDY

The University of Southampton and Riipen

What is the EUC offer for learners?

The University of Southampton Business School is the first UK university to sign up with [Riipen’s experiential learning platform](#), which offers online and flexible project-based work experience opportunities to post-secondary students.

Southampton moved quickly to rapidly scale delivery. Instead of designing new courses, lecturers adapt existing modules where the learning outcomes and module content have already been

validated, as have student expectations on assessment. Partnering with Riipen enables Southampton to embed real-world projects within these modules, offer students virtual work experience placements as part of their degree, and connect students directly with employers from Riipen’s international network.

Southampton is also using Riipen’s platform to engage with international offer holders, setting ‘challenges’ before their arrival on campus. This helps the students to start building their social networks and also cultivates an affinity

PARTNERSHIP WITH RIIPEN

350 STUDENTS



- 350 project experiences for postgraduate and undergraduate students in 2019-2020

6 EDUCATORS



- Stay up-to-date with latest in-demand skills
- Access to thousands of employers
- Improve student learning outcomes
- Increase course popularity among students
- Easily set up and manage PBL

13 COMPANIES



- 13 companies provided 350 student experiences
- 9 of which were international

with Southampton Business School; students can start building up their portfolios and receive meaningful feedback, with the intention that they arrive with validated skills in advance of beginning their formal degrees.

What is the scale of the partnership?

The collaboration began in 2018 with a pilot of one level five digital marketing module, hosted on Riipen's platform but using the university's existing business contacts with a small enterprise in Bristol. Dr Philip Alford, lecturer in digital marketing, who led the pilot, explained that the ambition at this stage was to use Riipen for project management and to demonstrate – to colleagues and senior leadership alike – “*what live projects could look like.*”

One year later, amid keen interest from the dean and head of school, Southampton began using Riipen more

actively and strategically, embarking on a three-year partnership. In 2019/20, Southampton listed six modules and connected with 13 employers to run projects – 50% of whom came from Riipen's global ecosystem and 50% of whom were invited from Southampton's existing enterprise and alumni networks. This offered 350 project experiences for postgraduate and undergraduate students. On average, students spend around 50 hours per semester on this work. In 2020/21, Southampton has listed 12 modules and the school has long-term ambitions to embed live learning in as many modules as possible.

What are the outcomes for:

• Learners

For Dr Alford, the key questions here are “*is it improving the students' experience, and their learning and employability?*” The answers look very different in a new learning landscape dominated by the

need to engage learners online. Working on Riipen's platform has facilitated a pedagogical shift to more project-based, practical working. *"Instead of just learning lots of new concepts and theories and frameworks and ideas," says Dr Alford, "the students can actually take what they've learned and apply it" in real-world business situations. This does more than simply add another dimension to the learning. Students can take ownership of their own learning process, co-designing projects with businesses and building their own portfolios in order to hone their workplace skills and improve their career readiness. "Through that application process they then go back and reflect on the theory again, so it becomes a nice circle between the theory and the practice."*

"It is one of the few modules where I have not only learnt theory but I really understand how to apply those theories to a real-life context."

Student, Level 5 Services Marketing

Student feedback so far has been positive; live learning consistently receives high scores in module evaluations and anecdotally, says Dr Alford: *"the main feedback we've had has been that it brings the theory to life."*

There have been challenges around student expectations. Dr Alford notes that *"there is always a bit of pushback from students who feel they've got to use yet another platform and so many logins"* and lecturers have to manage that initial frustration. The level of student confidence in employer-

led experiences has implications for assessment too, where students have to feel comfortable about what's being expected of them from both employers and the university. This is especially important when the projects are credit-bearing. *"You've got to be true to your academic learning outcomes," says Dr Alford, "but at the same time, you've got to be business relevant."* Live project-based assessment, hosted on Riipen, was recommended by Southampton students to the Faculty Education Committee as one of the best they had experienced.

But this is a transition students have to make post-graduation anyway, he reminds us – it is surely better for them to navigate it with the support of their university. And because students are completing the projects for course credit, it is a value add to the cost of higher education.

• Universities

Universities are currently on a swift, hard learning curve around digital capability. As a short-term response to Covid-19, faculties with little experience and expertise were forced to rapidly evolve solutions for moving core operations, such as teaching and assessment, online. Most universities are aware that there will be no wholesale return to pre-crisis methods. As the thinking shifts to long-term, and student goodwill wanes, the pressure on universities to improve their offering as part of the shift to remote learning has simply heightened the importance of Riipen's proven online delivery mechanisms. Shawn Lestage, director of operations at Riipen, recalls that when Covid-19 hit, *"we went from being a nice-to-have platform to being a must-have."* Meeting the challenge of online teaching with improved

student experience and higher student satisfaction will contribute to Southampton's ability to meet Office for Students (OfS) and Quality Assurance Agency (QAA) requirements, especially with metrics like the National Student Survey. It is too early to tell whether showcasing experiential learning has impacted student recruitment but Dr Alford predicts that it *"could be a decision-making factor."* In particular, in a climate where international student recruitment has become immensely challenging and a critical priority for UK universities, the direct engagement with prospective students all around the world that Riipen's project-based 'challenges' offer could be a real differentiator.

Lestage says that Riipen *"intentionally over-services"* its academic accounts to make the transition as easy as possible. Riipen provides a template to summarise the module offering, student responsibilities, employer responsibilities and outcomes, along with dedicated support teams to upload materials and source quality projects. This means universities can get started in just 30 minutes. In Dr Alford's experience, *"they're not just a platform, they're also an active partner."* At an institution or faculty level, Riipen retains 96% of customers, year on year.

Riipen's international scope has dramatically scaled Southampton's industry connections and setting international projects for students forms

part of its bid for EQUIS accreditation. Dr Alford hopes that these networks might trigger new research objectives, too, *"because once you're talking to an organisation and you've got a foot in the door, you can start to see some of the problems they've got and where you could make a difference."*

• Employers

Employers can use the projects for talent spotting, engaging the most talented graduates before they leave university, but they can also tap into university expertise to solve actual business problems or bring projects to address pressing skills gaps. Rahi Tajzadeh, CEO of Knowquest Inc, says he was *"blown away by the quality of work produced by the students at Southampton Business School."* Knowquest is a ratings discovery platform that helps professors and students provide anonymous data about their experiences, in order to identify the best educational resources; Southampton students helped Knowquest develop their value proposition by doing customer research with their potential audience. Tajzadeh remarks that *"their written skills were a wonderful complement to the high-quality technical analysis in their final deliverables."*

Riipen's virtual platform can support a wide range of projects, such as leveraging social media to develop effective sales strategies, developing and testing marketing campaigns, evaluating client service interactions, analysing data and more. In final reports and presentations, students can make strategic recommendations to companies. *"We enjoyed every minute being involved with the teams, and learned a lot,"* says Najeem Nijaty, director of regional recruiting

Blown away by the quality of work produced by the students at Southampton Business School.



at Freedom 55 Financial, about their experience of collaborating with universities on Riipen. *"Some of the ideas will help us shape up our product, systems, client engagements and candidate experiences to better attract top talent and be more competitive."*

"The Riipen system is a really effective communication tool," agrees Peter Hawkins, managing director of Mellowhawk Logistics. *"It has been very advantageous for us to track projects and to track communications with the candidate, and to grow ideas."*

What role has technology played in scaling this impact?

Riipen's platform is cloud based *"so from an implementation and integration standpoint, it's as low touch as it could be,"* explains Lestage. A single sign-on integrates with several major learning management systems, and in-app messaging opens a direct line of communication between students and employers, which typically proves difficult on internal learning systems. Lestage has also noticed several

unexpected benefits to the platform during the widespread shift to online teaching, as social learning has *"provided some support for students around mental health, because they have engagement with employers and with one another."*

Employability outcomes are Riipen's next ambition. *"As the ecosystem continues to grow,"* Lestage explains, *"the number of student experiences being generated will then allow us to start tracking: are employers starting to hire these students? Are they giving them placements? Are they getting interviews?"*

That next iteration really speaks to the imperative underlying Riipen's mission, and of mass employer-university collaboration as an ambition: *"we need to assure the feedback loops, so that industry and higher education are talking and refining what's being offered so that students are graduating and entering into meaningful employment within their chosen field."* This collaboration offers one way to imagine what the alternative might look like.



CASE STUDY

Coventry University,
FutureLearn and FourthRev**What is the EUC offer for learners?**

Universities are under increasing pressure on graduate outcomes. Yet they have traditionally avoided vocational-type offerings which develop particular skills and are aligned to particular technologies, hoping instead that the holistic skillset gained from a three-year degree will remain a sufficient differentiator within the workforce. However, in a digital economy, where applied capabilities on specific technologies is key, this could be one of the [key explainers of graduate underemployment](#). Delivering up-to-date and industry-relevant education can be difficult when it takes on average more than 18 months to develop a new undergraduate course, and the typical refresh cycle for university courses is close to five years. How can this curriculum model respond flexibly to the [urgent demand](#) for post-pandemic digital capabilities?

A new partnership is investigating the potential of microcredentials to solve this problem, using technology-enabled course co-creation with industry. Courses in digital skills, equivalent to postgraduate level, that have been co-created with industry can be taken online at FutureLearn, validated by Coventry University. Edtech startup FourthRev assists by enabling collaborations with technology leaders, including AWS, Salesforce, and Tableau. These collaborations bring industry-relevant content and technologies to the courses, allowing learners to develop in-demand digital capabilities. Matthew Jordan, head of operations

at Coventry University Online, says the university first began to work with FutureLearn on distance learning courses because *“their focus on social learning appealed to us”* but the partnership now taps into shared objectives around lifelong learning, workforce upskilling and creating pathways into higher education. From Coventry University’s perspective, FutureLearn has been *“a good partner for testing new concepts of learning because they’ve remained customer- and product-orientated, creating the new and innovative pathways into education that appeal to new audiences while keeping strong to our teaching and learning ethos and principles. Coventry and FutureLearn are very aligned on those principles and ethos.”*

What is the scale of the partnership?

Four [microcredentials](#) were launched in July 2020, each worth 15 credits, with “more to follow,” reports Catalina Schveninger, chief people officer at FutureLearn. The impetus for rapid growth is strong from industry. “It’s clear that people need to upskill and reskill now more than ever, so these microcredentials are a great example of people getting access to the education they need through short, skills-focused, credit-bearing courses.”

Alternative credentialing has the potential to expand in many different directions. For Coventry University, microcredentials in digital skills are part of a wider accreditation framework. Jordan explains that this is *“aimed at*

These microcredentials are a great example of people getting access to the education they need through short, skills-focused, credit-bearing courses.

people who are working, looking to upskill, reskill,” but “there’s nothing stopping it being at an undergraduate market looking to move into a graduate level role.” For now, the university is excited about the way this collaboration creates dedicated venues for workforce development and staff learning at scale. Coventry University is in conversation with several industry partners to develop further microcredentials.

FutureLearn’s vision is a global marketplace of learning, with microcredentials as the currency and universities as the banks who will accredit third-party content, agreeing trading standards between them and acting as custodians of market quality. *“What’s really exciting,”* Schveninger explains, is that *“FutureLearn has gained formal academic approval to offer industry-led microcredentials, with credit. This enables us to work directly with industry to design, build and deliver microcredentials that not only have university-grade teaching, learning and assessment, but career- and industry-relevant skills and knowledge as part of the learning experience.”*

What are the outcomes for:

- **Learners**

For learners, it’s a straightforward careers-focused proposition: the ability to learn new skills in a targeted,

time-bound way that will provide an immediate impact either in their existing profession or for their ambition to move into a new role. Access to the latest tools and technology is increasingly considered a prerequisite for career progression, and the ability to leverage those tools and technologies in order to solve problems is an increasingly vital skillset across a vast range of professions. But employers also seek those who can apply these skills across a range of contexts. The intention of microcredentials, delivered at postgraduate level, is still to develop broader capabilities, as opposed to vocational or product-specific tech training. For example, Tableau is the leading enterprise technology for data visualisation, so is introduced when learners are solving problems that require them to visualise data, but the course itself also teaches broader data skills, such as stats, spreadsheets, databases, SQL and more.

Modular pathways with transferable credit open up a whole plethora of possibilities. Learners could switch institutions each year or each semester, depending on their personal or professional circumstances. They could take credit-bearing courses over the summer, when university teaching is traditionally suspended, if it suits them. But all the time, learners are benefiting from the depth of knowledge, as well as breadth of skills development required for complex problems, that only universities can provide.

“Microcredentials offer learners the flexibility to pick and choose relevant courses that stack up to academic qualifications, without the time investment and financial pressure to pursue an actual degree,” says Schveninger. *“But most important, in my opinion, learners are building deeper and more relevant skills that qualify*

them for new, fulfilling jobs or upskill them to perform better in their current role.” Schveninger points to a “direct correlation” between microcredentials and employability, and the opportunity for higher education institutions to play a bigger role in shaping the future of work and skills.

Jordan insists that *“Coventry University is now evidence: it definitely can work.”* Retention, attainment and satisfaction for distance learners is *“the same, if not better, than those studying in-person and full-time, which tells you that we are starting to get things right in digital and distance education.”*

• Universities

The travel restrictions of the Covid-19 era put unprecedented pressure on international student revenues, meaning universities will need to investigate alternative sources of income. Adult learners are one under-used student cohort. More than 50% of the one billion global knowledge workers are projected to need upskilling or retraining in order to avoid being pushed into under- or unemployment. Given Covid-19's impact on the global economy, enrolment in vocationally oriented university courses may also accelerate with increased demand for viable routes into employment. The business case for microcredentials can be, according to Jordan, *“lower risk if developed as core to the university's traditional postgraduate offer.”* Compared to protracted existing curriculum development processes, then, this is a fast and non-capital-intensive way of getting new revenue streams up and running. Schveninger says collaboration *“will enable universities to efficiently get up-to-date, industry-relevant content to market quickly.”* Platforms such as FutureLearn

can help market the courses, so microcredentials provide universities with a model to *“scale up and expand into new disciplines and new markets where learners are interested in short, career-focused education.”*

Scaling and aggregating demand is one way to make microcredentials economically beneficial but it also has the potential to create new student cohorts. *“The business case for microcredentials doesn't necessarily stack up on its own,”* says Jordan but he predicts that progression will be the key factor. *“Universities have not necessarily set themselves up for repeat customers, so this is an area we will need to focus on to make that journey for learners convenient. This is going to require lifelong relationships – getting people back for learning that is relevant for their career and life, working towards further microcredentials and awards. It's about nurturing learners and taking them on a journey to stay with you.”*

Microcredentials offer a way for on-the-job and informal learning to be swiftly and formally recognised.

• Employers

An industry-aligned curriculum offers confidence for employers that these courses are talking to genuine skills gaps and that the capabilities developed will have a material impact on the learner's professional role. Based on his experience of speaking to large companies, Jordan suggests that corporate priorities tend to be *“the skills that come with higher education, but*

more accessible and shorter and to have an applied or practical aspect.”

Microcredentials offer a way for on-the-job and informal learning to be swiftly and formally recognised.

The big advantage over in-house credentialing – aside from cost – is that universities provide a rigorous academic infrastructure as well as significantly enhanced brand recognition for quality, compared to private education companies. A private training provider typically can’t ensure, says Jordan, *“the depth of knowledge that you benefit from hundreds of hours of study and that kind of higher cognitive development in terms of criticality and ability to apply learning to different contexts and situations.”*

What role has technology played in scaling this impact?

Jordan is clear that online microcredentials provide *“a real opportunity to collaborate in a way that you can’t do in face-to-face teaching.”* The widespread shift to remote teaching precipitated by Covid-19 should accelerate these changes. If content is already packaged online in modular formats, it becomes easier for universities to see how they might teach shorter, discrete units and credit accordingly.

FutureLearn partnered with edtech startup FourthRev to provide the course

content on its learning platform.

“A lot of our value is our ability to act as translators between universities and industry,” explains FourthRev co-founder Jack Hylands, *“to speak so both sides understand each other’s strategic goals, the sensitivities, and to do a lot of the heavy lifting so that we can facilitate employer-university collaboration at scale much more efficiently and effectively.”* With a third-party provider such as FourthRev acting as the nexus for multiple industry partners and HE institutions, *“it removes a lot of the blockers and time constraints of everyone starting from scratch every time.”*

FourthRev’s proposition is that if a university wants to release a new portfolio of courses co-created with industry, rather than setting up a whole new function within the university – sourcing industry partnerships, defining the product offerings and building the courses, all of which could take several years – *“we can come with the core of a ready-made portfolio that brings up-to-date, high quality content, aligned to industry certifications and qualification frameworks, and a curriculum that speaks to specific skills gaps in the market, which can be switched on in as little as 12 weeks.”*

Hylands stresses that *“it isn’t going completely to one end of the pendulum and just being a pure industry-focused product training. It’s about developing those broader capabilities, which people trust universities to help them with.”* Hylands believes universities will be *“central to solving the big capabilities gap that exists”* but argues that *“if they are going to play that core role and deliver on their mission in a world characterised by lifelong learning, then they need to increasingly have offers which are alongside their traditional*

Other universities should be looking at what Coventry is doing and how they can diversify their offering

undergraduate and postgraduate degrees, and those offerings need to be focused on career outcomes.”

“These microcredentials are just one example of how forward-thinking and innovative Coventry is as an institution,” concludes Schveninger. “They recognise the opportunity that collaboration provides and are leading the way.”

The challenges to this sector are more paramount than ever. *“Other universities should be looking at what Coventry University is doing and how they can diversify their offering, especially now as reskilling and upskilling become a key part of our economic recovery.”*

CASE STUDY

University of Stirling

What is the EUC offer for learners?

“Too often universities separate out learning and skills from research and innovation,” says Dr John Rogers, executive director of research and innovation services at the University of Stirling, “but actually, when we talk to companies, they tell us about the full range of support that they need, which includes research, development and prototyping but also help with developing the core skills that will enable them to then deliver those new products and services within the market and workplace.” Stirling is at the forefront of an employer-university collaboration that works across supply chains to engage small and medium sized business and meet local economy needs. The collaboration combines teaching and skills training capabilities for learners with cutting edge business-focused research.

The Forth Valley is a region with a high degree of socioeconomic polarisation. High skilled individuals tend to

commute out of the region to major cities like Edinburgh and Glasgow, while local employment tends towards lower skilled, lower paid work. The region was historically dependent on heavy industry, which in its wake has left a legacy of multi-generational unemployment, low aspiration and low access to skilled employment. The region also has a large rural hinterland and a high dependency on the tourism sector. While many employer-university collaborations focus on large anchor companies, Stirling has found that – like many regional economies across the UK – the business demographic of the Forth Valley is characterised by small and medium sized enterprises, low business density, low skilled job density, and, says Dr Rogers, *“very low levels of business investment in research and development.”*

The Stirling and Clackmannanshire City Region Deal is a £214m investment in the future of the Forth Valley region. The University of Stirling is leading the delivery of the innovation workstream

in the deal – representing some 50% of the total investment – and *“one of the key objectives is creating an integrated innovation and skills ecosystem that helps to address the socioeconomic polarisation here,”* explains Dr Rogers. Stirling is the only university in the Forth Valley and, working in strategic partnership with Forth Valley College and regional businesses, the university is seeking to understand the challenges businesses are facing and pioneer new solutions, creating high-value jobs and industry-aligned learning, and supporting greater productivity.

What is the scale of the partnership?

The City Region Deal provides £39m of direct government investment for two research and innovation hubs at the University, which bring together industry and academic research: £17m for the National Aquaculture Technology and Innovation Hub, and £22m for Scotland’s International Environment Centre, which supports organisations to transition to sustainable business models and upskill staff to operate in emerging green economies.

The university is also leading on another flagship programme: an intergenerational living innovation hub, which brings together academic and business research using future technologies to address the challenges and opportunities posed by ageing populations. Working closely with organisations across multiple sectors, from producers and retailers to regulatory bodies, the university’s research supports businesses to innovate in order to access commercial markets around the world, from development through to production and point of sale.

Stirling’s strategic partnership with Forth Valley College, meanwhile, *“is different to a lot of the conventional articulation agreements that you get between colleges and universities,”* suggests Dr Rogers. *“We’re working with employers to develop new skills pathways and we’ve developed jointly four integrated degree programmes that are deliberately tailored to meet skills deficits that have been identified by key sectors within Scotland.”* Those degrees are in applied biological sciences, applied computer science, digital media, and heritage and tourism. They launched in 2015 and, with additional investment from the Scottish Funding Council, now support in excess of 200 learners per year.

The key feature of these integrated degree programmes is that they are co-designed, so *“the college’s expertise in teaching technical skills and the university’s expertise in developing academic skills really blend together.”* Learners are admitted from the outset as University of Stirling students but take the first two years largely at college. A minimum of one semester of their third year will be spent embedded in a company and then, in the fourth year, they complete an honours degree. There are exit points at the end of every year with accredited learning outcomes.

Accessibility is key.

What are the outcomes for:

- **Learners**

The first two years of an integrated degree have a strong focus on practical skills, meaning Forth Valley College degree students transition to university

with a high level of lab and technical skills that should translate to workplace-ready skillsets. Class sizes are smaller than average at university, which means more one-to-one time with lecturers.

“Often,” observes Dr Rogers, “the learners on those programmes have come from non-conventional backgrounds, so accessibility is key.” For learners who have just left school or have caring commitments, travelling to study in a city such as Edinburgh or Glasgow can be a daunting and expensive prospect. The college has three campus locations at Falkirk, Stirling and Alloa, which makes it easier and cheaper for local learners to access high quality education close to home.

• Universities

The first thing that Stirling and Forth Valley College recognised, according to Dr Rogers, was that *“the strengths of the two organisations are different and complementary, and, actually, if you’re going to address what employers are looking for, you need both.”* Too often, competition for a small proportion of learners hinders university and college partnerships but senior leadership here *“said from the outset that our complementary skills that we draw together will give us a better set of learning outcomes, more closely attuned to employer needs.”*

Dr Rogers adds that *“FE colleges in general are much better than universities at engaging with local and*

regional employers, because they offer a broader range of learning outcomes,” typically everything from basic technical skills to full graduate apprenticeships. The University of Stirling found *“there was real value for us in learning from that experience.”*

The college had already developed innovative relationships with local schools to better support the transition for learners and create different access pathways to further education. The partnership is now looking to use the University of Stirling’s strong international profile to enter international markets with partnership offers, which would offer a diversified income stream.

• Employers

The university’s research hubs seek to translate global growth into high quality local jobs. Given the business demographic within the region, working with representative bodies and intermediary organisations is vital to building business relationships at scale. *“If you want to talk to many small companies, where the issue will be acute,”* says Dr Rogers, *“you need ways of doing that, so partnership with the Forth Valley Chamber of Commerce, with the regional Institute of Directors and with local business support organisations is critically important.”*

What role has technology played in scaling this impact?

Technology is vital to the innovative research undertaken in the hubs. The Aquaculture Innovation Hub, which seeks to create the UK’s leading innovation community for sustainable aquatic food production, leads the

Technology is vital to the innovative research undertaken in the hubs.

development and deployment of the new technologies and systems required to support growth in the production of aquatic food for human consumption while reducing the impact on natural resources. New, state-of-the-art laboratories and aquatic experimental facilities underpin the work, enabling academics to conduct dynamic and commercially relevant research in partnership with leading aquaculture companies. The Intergenerational Living Innovation Hub includes data-driven smart homes, innovation in construction and housing supply finance, and unique integration of environmental and demographic resilience in community design. A new, comprehensive regional

digital fabric and high performance data centre will underpin innovation through Scotland's International Environment Centre, and the first Scottish 5G Innovation Hub is being developed in the Forth Valley.

Stirling's ambition is that, over the next decade, the innovation workstream of the City Region Deal will *"deliver a transformative impact on the business and skills base within the Forth Valley region."* This ambition can only be achieved by further deepening and extending the strategic partnership and collaboration between the University, Forth Valley College and employers.

CASE STUDY

Sheffield Hallam University and RISE

What is the EUC offer for learners?

In 2016, [more than 100,000 graduates](#) had left the region where they studied after just six months to take up work elsewhere. The thinktank [Centre for Cities](#) has also highlighted the gravitational pull of the capital; on average, between 2009 and 2012, 35% of all jobs in London were graduate jobs, compared with 26% for other large cities. But times are changing. Covid-19 is accelerating migration away from the capital, as graduates pursue lower living costs and a perceived higher quality of life. The challenge will be to ensure that this shift is not facilitated solely by remote working but also supports

opportunities within local economies, enabling business growth and retaining graduate talent in regional economic areas. This is the mission of RISE, a partnership between Sheffield City Council, Sheffield Hallam University and the University of Sheffield.⁴

"The RISE programme came out of not just a graduate issue, but also an SME issue," says Conor Moss, group director of education, skills and employer partnerships at Sheffield Hallam University, *"and the SME issue was capacity building."* Sheffield, like many northern cities, has a large SME base but SMEs are largely unknown employment destinations for graduates. *"SMEs were missing out on brilliant*

⁴The partnership is part-funded by the England European Regional Development Fund as part of the European Structural and Investment Funds Growth Programme 2014-2020.

SMEs were missing out on brilliant talent. Graduates were missing out on working with really brilliant SMEs. The RISE programme was set up to try and close that gap.

talent. Graduates were missing out on working with really brilliant SMEs. The RISE programme was set up to try and close that gap."

Under RISE, the city's two universities encourage more SMEs to hire graduates by providing support throughout the job creation and recruitment process. They work with the employers to develop the graduate-level role, ensure it is paid at market rate, design the job description and person specification and then market the post to current students, recent graduates and returning graduates. Assistance is also offered to assess CVs, interview a longlist of candidates and send through a shortlist for the company to meet. The employer provides the successful graduate with a paid internship of around six months – the hope is that a permanent job will follow. The service is free of charge, with an additional one-off bursary of £1,000 towards employment costs for new employers.

What is the scale of the partnership?

After a pilot launched with 50 internships in 2013, more than 40 went on to permanent jobs. RISE became a fully-fledged scheme the following year and so far, it has supported approximately 300 regional SMEs to offer placements to 450 graduates. 70% of graduates who stayed on with those companies were earning £30,000 within 18 months. *"And the other 30% wasn't because*

the company didn't want to extend the placement," explains Moss, *"it was mostly because the graduate left for something else rather than the company not wanting them, so there has been huge success around SME satisfaction and that individual's progression within the SME."*

RISE supports three recruitment opportunities a year – summer, autumn, and post-Christmas – in contrast to large graduate recruitment schemes which tend to operate annually. *"SMEs are more fluid,"* explains Moss, *"so we've refined when we do those recruitment points to suit the different cycles of a small company."* RISE aims to offer 120 placements in total across a year. To be eligible, SMEs must be based in the Sheffield City Region, employ fewer than 250 people and be looking to create new graduate-level jobs, though RISE has also expanded to offer jobs in the wider Yorkshire region, including locations such as Barnsley and Chesterfield. Early indications suggest boosting graduate employment is paying off for Sheffield. For every £1 invested in RISE there was a return on investment of £5.71, according to an evaluation of the pilot.

What are the outcomes for:

• Learners

RISE is one part of a change in the role of the careers centre at Sheffield Hallam. Learners are given career navigation

The scheme boasts an intern-to-permanent-position conversion rate of 85%

and application support, while being guided towards interesting roles in their local community that they may not have otherwise encountered or considered. The scheme boasts an intern-to-permanent-position conversion rate of 85%, outperforming many other graduate initiatives. The process should be beneficial even for those whose applications are not successful. *"The idea was that even if we had 20 people apply for one job," says Moss, "20 people are going to get a real graduate recruitment experience: application, video interview, assessment centre interview. And that four-stage process was a good experience for many graduates, whether they got the job or not."*

The internships build on Sheffield Hallam's emphasis on applied learning at undergraduate and postgraduate level. Moss explains some of the recent major changes *"to orient towards a more applied curriculum, providing unique connectivity with employers and industries."* Every programme must have a work experience opportunity every year, such as a short placement or consultancy project, worth 20 credits as a minimum – *"that's whether you're doing English or Engineering"* – and graduate attributes are built into every course. RISE takes this ethos and threads it through learners' post-educational engagement with the university.

• Universities

Moss is keen to emphasise the positive societal impact as well as the financial implications of collaboration for Sheffield Hallam: *"we feel very passionately about supporting our region, and if our region is performing better, then the opportunities for our graduates will be better and the economy improves."* RISE builds on the university's civic mission by supporting employment and skills development in the local economy. Sheffield Hallam has a 'global footprint' and works with multinationals too, but Moss believes that a local institution can provide crucial insight and expertise into local skills gaps. Running this as a central network mitigates against some of the risks for the universities around building intensive relationships with SMEs, who may have lower longevity.

The university is also making it part of a holistic redesign of careers support and employability outcomes for its graduates. *"One thing that we've been really keen on," says Moss, "is to cross-refer into different programmes. We've now got an overarching SME hub to bring everything together, whether it's RISE, our internship scheme, the innovation programme, or an SME just wants to do a project with us. Before, that was all quite separate."* This 'one-stop shop' provides a single, direct point of contact between employers and the university: a channel for employers to communicate what they need, so that these priorities can then be embedded into careers provision and teaching. Moss explains that the university *"has learned from our extensive engagement with SMEs that they want an easy way into working with universities and to make that happen we have to hide the wiring between the various programmes we run."*

• Employers

RISE provides access to a demographic that most local employers have little exposure to. SMEs often struggle to attract high-calibre candidates, both because of the marketing demands and the difficulty of offering wage parity with multinationals. RISE promotes SMEs as an attractive graduate destination.

It makes the recruitment process easier by saving time and costs, but RISE is also about developing long-term know-how around attracting, recruiting and developing a graduate. In an independent study into the first 50 RISE internships, the majority of SMEs stated they would not have employed a graduate in the absence of RISE or would have been unable to find the right quality of graduate. The advantage for SMEs of engaging local universities as part of a large partnership is that it has helped to establish a community of practice in Sheffield that aggregates knowledge; SMEs can pursue individual contacts with particular courses or academics but they are not dependent on that single, contingent connection for an ongoing relationship.

Centralised communication also makes it easier for employers to coordinate and align incentives with universities. Moss says he had long been aware that when Sheffield Hallam was working with employers as part of its careers service, *“we weren’t maximising our relationships with those SMEs – so we weren’t doing innovation projects with more research or supporting them with placements or internships or live projects.”* RISE employs an SME manager who now works closely with local businesses to support their growth. *“We’re referring them into other programmes that the two universities have, such as the Sheffield innovation*

programme. So, for example, because of Covid, many companies had to move to a postal service and online, so we’ve been working with them to support their packaging redesign.” That’s been *“an additional benefit of the RISE programme: we might have worked with that SME for a graduate before but actually, as universities, we have much more we can offer them.”*

Many of the businesses involved have reported increases in turnover, productivity, innovation and growth. The study found that the first 50 placements generated an economic impact of £1.34m gross added value for the city economy.

What role has technology played in scaling this impact?

Moss says that *“technology can and will play a significant role, particularly around selection, recruitment and matching up to organisations.”*

Gradconsult runs the scheme on behalf of the universities and local authority, and the ambitions have moved towards a regional strategy to support SME growth rather than a singular product focus, using the SME hub.

The other area where Moss is excited about technological potential is *“connectivity to apply projects.”* Currently, *“with business, we do it all manually; we have people going out and visiting something.”* This is not just about scale: every year at Sheffield Hallam, 7,000 students will do an applied project. *“What we need to do is make that more efficient as a way of running that system.”* For Moss, *“RISE ultimately demonstrates the successes that can be achieved when academia and industry collaborate and innovate to help businesses find the best talent.”*

PART 2: The future of EUC – technology-enabled mass collaboration

Introduction

The win-win proposition: benefits of EUC to learners, employers and universities.

To have a truly significant impact on closing the skills gap and meeting the expectations of learners, employers and universities can and must collaborate much more closely and consistently and that collaboration must become embedded in the current models of higher education provision. We believe that the most significant barrier to this currently is the absence of a clear win-win proposition that speaks to the needs and strategic considerations of both universities and employers. Our research shows that both sides can lack insight into each other's incentives and motivations, but the benefits they can expect from collaboration are in fact closely aligned, as the table, right, shows.



Benefit to universities	Benefit to employers
Improved employability outcomes for graduates	Improved quality of early talent at entry level
Higher student satisfaction from opportunities to engage with employers at every stage of the course	Engaging the most talented graduates (of every age) before they leave university
Potential new sources of revenue	Cost savings on in-house training functions, reduced need to invest in pedagogical expertise
Fulfilling the civic mission by supporting employment and skills development in the local economy and the levelling up agenda	Meeting Corporate Social Responsibility (CSR) goals and enjoying positive brand impact
Consistent and proactive engagement with students from underrepresented backgrounds	Meeting diversity and inclusion goals, injection of fresh thinking

Understanding how the goals and aspirations of universities and employers align and feed into each other can go a long way towards addressing some of the lingering suspicion that can still get in the way of effective collaboration. As a result, if scaled effectively, these activities can have a genuinely transformative

effect on the lives of learners by equipping them with in-demand skills, recognised credentials and invaluable experience of the workplace.

The question remains: how do you scale this impact effectively? The answer is **technology-enabled** mass EUC.

The question remains: how do you scale this impact effectively? The answer is technology-enabled mass EUC.

What does EUC look like at scale? The growth of course co-creation and experiential learning

One of the defining trends of employer-university collaboration today is the growing role of third-party technology platforms in scaling best practice.

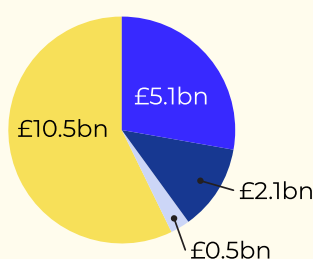
Universities and employers that have experienced the benefits of EUC are looking for ways to expand their engagement and there is only so much they can achieve on their own. There are two particular areas where we expect to see significant growth in the use of third-party partners: course co-creation and co-delivery, and experiential learning.

We estimate the market size for technology platforms enabling EUC – based on the total number of potential learners and the percentage of revenue

technology companies are likely to capture – at £18.2bn for the US, UK and the rest of Europe. At the moment, this market is dominated by career navigation and signposting platforms, followed by education as a work benefit. Conversely, course co-creation and experiential learning are the two smallest categories, coming to a total of just over £2.6bn. Over the next decade, however, we expect this relationship to reverse, with the latter two categories growing to a combined total of £28.9bn. Here is what will drive this growth:

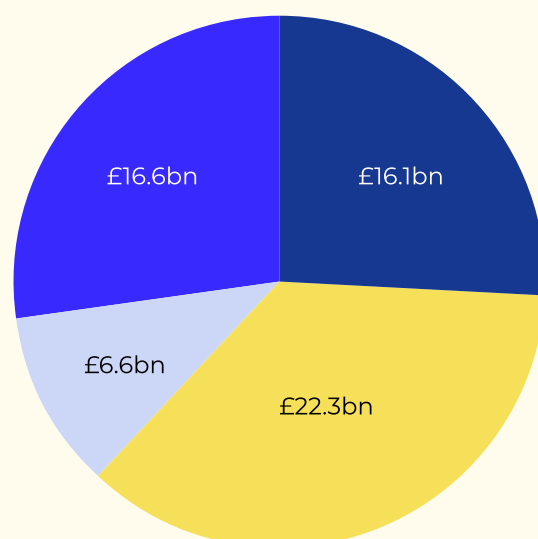
From 2020–2030
we expect a CAGR of 13%

2020 total
market size:
£18.2bn



- Education as work-benefit
- Course co-creation and co-delivery
- Experiential learning
- Career navigation and signposting

2030 projected market size:
£16.6bn



Driver 1: Learner population growth

While we expect the total number of university students to almost double over the coming decade, and a much larger proportion of these students to take up EUC-enabled courses, we anticipate the number of adult learners who take up these courses will grow even more quickly in response to the widening skills gap. For example, more than 50% of the one billion global knowledge workers are projected to need upskilling or retraining to avoid being pushed into under- or unemployment. In the current climate, due to disruption from Covid-19 and its impact on the global economy, we also expect enrolment in vocationally oriented university courses to accelerate further, given increased demand for viable routes into employment.

Driver 2: Growth in proportion of university offerings enabled by EUC

We believe that the adoption of EUC will grow rapidly as universities continue to increase their focus on employability outcomes; technology enables EUC to be implemented at scale. This can be seen in the case of the Institute of Coding (IoC) in the UK, a consortium of 35 universities and 100+ employers working together to tackle the digital skills gap. By using online platforms such as FutureLearn, the consortium increased its portfolio of co-created courses from 35 to 100+ over the course of 2019. We see the greatest growth potential here for course co-creation/ co-delivery and experiential learning, which currently exist on a very small scale across a few institutions. New technology providers, such as FourthRev and Riipen mentioned above, are well positioned to support universities in realising this potential and embedding EUC within their current offerings at scale over the coming years.

Driver 3: Increased revenue share for startups

The role of startups in this space will continue to grow as they develop networks and marketplaces with thousands of universities and employers. This will unlock unique scaling opportunities for both sides of the marketplace. At the same time, the resulting network effects and the growing volumes of data gathered by the future large players will enable them to command a higher share of revenue. For example, these leading players will be in a unique position to define the future taxonomy for skills and also implement personalisation to optimise outcomes for learners.

The economic and social impact of EUC

We expect the greatest growth potential for course co-creation/co-delivery and experiential learning because they are starting from the lowest base and also offer the biggest opportunity for achieving scale through the use of technology.

They are also complementary and maximise impact when delivered in conjunction. Specifically, they help to address long-standing criticisms that university curricula are too 'academic' and they give graduates hands-on experience of the world of work that is underpinned by solid pedagogy. The end result is that students are likely to be more confident in their interactions with potential employers, know what to expect once they start working and can contribute meaningfully from day one on the job.

Beyond the individual, achieving mass adoption of employer-university collaboration also has the potential to transform productivity in the UK. **By our estimate, if this type of EUC became standard practice in the UK, it could add, at a minimum, an extra £50–80bn annually to the UK economy.**

No standard measure exists to assess the wider economic impact of students' exposure to the world of work, but economists estimate that workplace training (including apprenticeships) produces additional productivity gains for employers of between 25% and 100% on top of individuals' wage gain. Assuming – rather conservatively – that EUC has no impact on graduate income,

this would mean productivity gains of between 2.5% and 4.1% a year, or £50bn to £80bn⁵.

Moreover, wider adoption of EUC approaches will have ramifications that go beyond the economic impact. Over the past few decades, the UK has made amazing strides in making higher education available to traditionally underrepresented groups. Today, there are more women, minority ethnic students and people from lower socioeconomic backgrounds in our universities than ever before. In many ways, the agenda of widening participation has been a great success story for UK higher education. At the same time, once they leave university behind, the outcomes of this new generation of students in the workplace lag behind their more privileged peers⁶, particularly outside London and the south east – at a time when students from disadvantaged backgrounds are much more likely to return to their home towns or stay in the same town where they went to university, rather than relocate for work.⁷ While remote work is moving towards becoming the new normal in some fast-growing sectors such as digital technology and beyond, in the aftermath of Covid-19, there is evidence that,

without close support from universities and employers, students from disadvantaged backgrounds are less likely to gain the skills needed to be an effective remote worker than their more privileged peers.⁸ In practice, this means that the EUC agenda is closely related to the social mobility and levelling up agenda. Employers are increasingly looking beyond academic qualifications and experience in considering candidates for graduate recruitment, bringing into focus the importance of experiences outside the classroom.

This puts traditionally underrepresented students at a disadvantage. In the first instance, they often come from schools with poor careers advice, so lack visibility of which experiences and skills employers value. Unlike better-connected peers, they may put off engaging with support structures such as the careers service until much later in the course. More generally, students from lower socioeconomic backgrounds are less likely to join societies, take leadership roles in sport

or take up internship opportunities for a variety of reasons, including financial or time constraints. However, experience of the workplace is rapidly becoming not simply highly valuable but almost a prerequisite for graduate-level jobs – something students from disadvantaged backgrounds can struggle to access. Mass EUC, where engagement with employers at university is a matter of course, not a matter of choice, will provide this experience to every student regardless of institution and background, with a great positive impact on local communities as well as on student outcomes.⁹

The prize is therefore a significant one. In the next part of this report, we explore the practical implications and strategic considerations for scaling EUC in these two areas across universities and employers, with a brief set of recommendations for government and technology companies on how they can create the best environment for this to happen.

⁸ Gambin, L, Beaven, R, Hogarth, T, May-Gillings, M and Long, K (April 2014) [Methodological issues in estimating the economic value added of HE, FE and skills: A review of relevant literature](#), BIS Research Paper No 166, Department for Business, Innovation and Skills, London. 25% is the authors' suggested lower bound and 100% is the commonly accepted figure, used by the government to estimate returns on apprenticeships. The authors urge caution in applying these figures to HE because of the lack of employer participation in course design – which suggests that in our case this approach is in fact appropriate. Our estimate is based on the median HE wage gain of 27% over the next decade (IFS estimate), or 2.7% a year, reduced by 25% to correct for the signalling effects of higher education qualifications (as suggested in Gambin et al, 2014). The financial impact is based on the 2019 Gross Value Added (GVA) figure from the Office of National Statistics, a standard measure of productivity.

⁹ For example, pay gaps persist for women (who earn [9% less than male counterparts](#) in their first year in the workplace, despite a numerical

advantage in student numbers, rising to 30% after ten years) and BAME students ([black male graduates earn 17% less than white male graduates](#) after accounting for their background and their job – equivalent to more than £7,000 a year).

⁷ Swinney, P and Williams, M (2011) [The great British brain drain: The migration of students and graduates](#). London: Centre for Cities. A graduate is much more likely to relocate to London if they went to a Russell Group university and graduated with a first or upper second.

⁸ Owens, T, Walsh, I, Tan, S-L and Beck, S (July 2017) [The State of Social Mobility in the UK](#). London: Boston Consulting Group and Sutton Trust.

⁹ Iosad, A and Attewell, S (2020) [Employability rebooted: Democratising the future of work](#). London: Emerge Education and Bristol: Jisc.

Introduction

In this part of the report, we will look at some of the ways in which universities, employers, government and technology companies can work together to accelerate the growth of mass EUC in course co-creation and co-delivery and experiential learning.

The next three years will lay the foundations of this growth and our aim with these recommendations is to equip universities and employers to establish new scalable and long-term partnerships. By 2023, we would like to see 50 or more such partnerships created to deliver EUC-powered courses for an additional 10,000 learners.

As we have seen previously, the most significant barrier to effective collaboration is the lack of a well-articulated, shared and compelling 'win-win' proposition for universities and employers. Above, we have outlined the ways in which university and employer aims are in practice fully aligned. This shows that partnerships between the two parties are not zero-sum games – both have something unique to bring to the table and by working together they can achieve their shared goals.



Nonetheless, a number of further barriers remain, identified through a series of stakeholder interviews:

- Inconsistent and incomplete data.** For example, on how university courses translate to employability outcomes for learners. A recent survey of 531 senior HR managers by Pearson Business School found that only 13% felt graduates were ‘ready to hit the ground running’ on arrival in the workplace. In fact, little data is publicly available on the number of universities and employers engaged in EUC, particularly when it comes to course content (as opposed to, for example, knowledge and technology transfer activities). As technology platforms become central to EUC, more data can be collected on the effectiveness of specific projects and interventions.
- Related to the above, there is **a lack of transparency around ROI for EUC.** Existing initiatives require significant upfront investments of money and time, and costs tend not to be subject to economies of scale. Here, too, third-party platforms may play a role in overcoming this barrier, as they absorb some of the setup costs. The revenue-share model used by many third-party providers is also likely to improve transparency and can, in some cases, provide additional sources of income to universities.
- Fragmented ownership of EUC initiatives.** There is a need for a ‘common front door’ with clear signposting of opportunities for collaboration. In our research, the need to align agendas and expectations for multiple partners was a major source of delay and uncertainty in establishing effective partnerships. University stakeholders pointed to the need to create a dedicated central function to manage these relationships, whereas employers struggled to identify who to approach. Third-party partners can introduce greater consistency to the process of establishing the relationship and serve as a clear channel for entry.
- Operational complexity.** Many existing EUC models are operationally complex to implement. For example, the management and delivery of micro-internships for 100+ students at a time is extremely difficult in the current paradigm where there is a lack of clear guidelines and streamlined processes. At the same time, current models of EUC are rooted in building deep partnerships with one institution at a time. As these models can be very time intensive, the number of partnerships each university or employer can build is limited.
- Cultural challenges on both sides.** For universities, some of the key barriers include differences in the perception of EUC’s importance across subject areas (for example, architecture vs politics), lack of up-to-date, non-academic experience for many university staff and gaps in both digital and ‘soft’ skills required for successful collaboration. Among employers, our interviews pointed to resistance to new practices among employers (a “we’ve always done it this way” attitude), in some cases where academics argued for teaching best practice; a lack of a shared language and common taxonomy for skills between universities and employers,

leading to disagreement and miscommunication; and a mismatch of pace of change. Interestingly, we heard examples of both universities and employers being the slower-moving party in a collaboration.

- Challenges around **adapting the traditional university model to employer-designed courses**. One example of this is the rigid structure of the academic year, which can be out of sync with employer needs. Similarly, the validation of new courses or changes to existing ones can be a slow process that fails to keep up with employer practice in subject areas like IT – either through a lack of foresight in course design or because of a conservative attitude on the part of PSRBs.
- **Employer longevity**. Some interviewees pointed to the challenge of setting up a relationship with an employer to deliver courses or experiential learning, only for the employer to go out of business within several years. This challenge is particularly acute for SMEs. Here, too, the use of technology platforms can mitigate some of the risks as, at the scale they enable, the relative significance of a single partner is decreased.

Checklist for universities

What are some of the considerations that universities need to take into account when deciding on how they can use technology to scale up their collaboration with employers – and what are some initiatives they can adopt to mitigate the common barriers?

Strategic considerations

- **Size of the university (number of students) and scale of individual courses and modules**. Universities need to identify the smallest and largest courses that can be delivered in a cost-effective manner where EUC will have the biggest impact on the student experience and outcomes.
- **Ability and desire to deliver ‘non-traditional’ courses (ie not the three-year undergraduate degree)**. This will help decide whether EUC-powered courses are embedded in the ‘traditional’ degree (the ‘embed’ model) or are available to current and prospective students as separate or extracurricular activities (the ‘cred’ model). The latter can also be delivered outside the traditional academic year to better align with employer needs. This requires a rethinking of curricula to identify opportunities for delivery of microcredentials for current and new student populations.

- **The funding model for non-credit-bearing courses**, particularly the availability of government-backed or privately-provided student loans. Can EUC-powered courses generate revenue for the university at significant scale across different student populations or is there a need to rely on self-funded (or employer-sponsored) students?
- **Alignment of employer-led courses to the university mission and USP**. The university will need to articulate the value proposition of the course not only to employers but also to students, staff and other relevant stakeholders.
- **Student body demographics and expectations**, and the level of interest and confidence they have in employer-led courses or content.
- **Use of existing estates and plans for the future**. For example, will buildings continue to be used for academic purposes or can they be repurposed to encourage interaction with employers?
- **Initial setup costs for major industry partnerships** (eg in healthcare) and the costs of experiential learning delivery, weighed up against potential new sources of revenue from provision. Some universities have successfully attracted external funding for partnerships of this kind but it is worth being aware that the financial risk is still underwritten by the university.
- **Shape and skills needs of the local economy** and the university's ability to position the university as a global expert in specific subject areas or niches. This will help determine which courses to focus on first and what the marketing strategy would be.

Strategies to address barriers

- The key need is to **adopt a whole-institution strategic approach to EUC that focuses on culture change for staff and students** and removes barriers to collaboration between stakeholders within it. This includes:
 - **Creating clear ownership and accountability** for EUC at the senior leadership level.
 - **Introducing EUC indicators / success metrics** within university strategy documents, as well as identifying which current success metrics EUC activities are likely to contribute to and putting in place ways to track its impact on these metrics.
 - **Ensuring staff appointments and training are informed by the focus on EUC** (for example, providing professional development opportunities to address soft skills gaps that put successful collaboration at risk). In particular, universities can increase the number of appointments of staff who split their time between academia and industry (eg 50/50 split between university- and work-based).

- **Identifying examples of good practice** across the university and creating opportunities for others to learn from these (for example, by creating a shared internal resource repository or blog).
- **Articulate a clear ‘menu of options’ for collaboration** (which employers can then refer to) and design a course co-creation model that follows a consistent process but allows for ‘variation around the spine’ to recognise differences across subject areas.
 - Both of those goals can be more easily achieved by **partnering with third-party technology providers** but universities will want to ensure that the set of options and the co-creation model are both in line with their expectations.
 - **Identify revenue generation opportunities** among the set of options on offer and ensure there is a clear message around the ROI those options would deliver both to the university and to the employer (or learner)
 - In addition to ownership at senior level, **universities should have a named contact for course-related EUC** that employers can approach, with responsibility for ‘success management’ within these collaborations.
- **Review academic programmes** to ensure appropriate EUC components are introduced. In the aftermath of Covid-19, the importance of digital skills for employability is likely to increase even further as more workplaces shift to a ‘digital by default’ model. The shift to a greater amount of online learning provides opportunities to mirror this future workplace experience in the way students are taught today.
 - **Provide greater transparency around curricula** to employers so they are aware of what is currently taught, and how, that is relevant to them.
 - **Explore opportunities for microcredentials or stackable degrees** designed and delivered in collaboration with employers. These shorter qualifications could contribute to students’ employment prospects and would be attractive to existing employees who can validate their skills and knowledge.
- **Set out clear success definitions for partnerships** from the beginning and a way to continuously track metrics, with clear roles for each party. Universities have the opportunity to be more entrepreneurial and flexible on contracting and re-contracting both with employers and third party providers to ensure they are not ‘locked into’ partnerships that are not delivering the right outcomes.

Checklist for employers

What are some of the considerations that employers need to take into account when deciding on how they can use technology to scale up their collaboration with universities – and what are some initiatives they can adopt to mitigate the common barriers?

Strategic considerations

- **Pros and cons of engaging universities individually** (a one-to-many model) or participating in industry-wide or supply chain-based partnerships (a many-to-many or many-to-one model). The right choice here will depend both on employer size (eg SMEs may prefer the supply chain approach) and the industry in which they operate.
- **Choosing between a narrow focus** (or transactional model) of **collaboration** and a **holistic approach** (relationship-based model) to the benefits of university collaboration. The latter requires a more significant investment of time but may produce wider strategic benefits than collaboration on, for example, developing a particular skill set.
- **The shape of the regional education sector** and whether local institutions can provide expertise in the required skills. This will help in understanding whether to prioritise engagement with local education providers, potentially contributing to CSR goals, or national/global leaders in specific fields.
- **Pace of change within the subject area** and which model will deliver content that is appropriately up to date. For example, business administration may be better suited to collaboration around a full degree whereas marketing would lend itself well to a shorter, frequently updated course.

Strategies to address barriers

- **Establish or participate in communities of practice that aggregate knowledge across the supply chain and different sizes of organisations**, so that large businesses can support SMEs in the same industry (and potentially build stronger relationships in the supply chain).
 - Work with local enterprise partnerships, chambers of commerce and other trade organisations to ensure representation from across the region or industry. This may also open up opportunities to fund EUC-related activity for small enterprises that would otherwise lack the resources to engage.

- Work with SMEs to map skills shortages they face at a granular level and use course-related EUC to address those gaps.
- **Track hiring and performance metrics for employees recruited** as a result of relationships established during their time at university, to demonstrate ROI and implement improvements in the courses and learning experiences.
- **Recognise the commercial value of tapping into the expertise of staff and students to solve real problems faced by the firm** (eg through ‘challenges’), especially where students are a key demographic for the employer (gaming, for example).
 - Leverage university relationships to bring fresh thinking to the company, for example through reverse mentoring initiatives where students are matched to senior managers within it.
- **In internal and external communications, emphasise the positive societal impact of EUC as well as the financial implications of collaboration.** This will help improve buy in within the organisation while demonstrating the alignment of incentives to potential partner universities.
- **Make explicit the link between EUC and meeting the goals of corporate diversity and inclusion initiatives.** Mass EUC allows employers to reach a more diverse set of institutions and tap into talent that otherwise would be difficult to reach and engage.



Recommendations for government

Our research shows that there is significant interest among both universities and employers in advancing the EUC agenda regardless of government support. However, we have identified a number of policy-related challenges, where addressing existing regulatory barriers or gaps in knowledge would create a more welcoming environment for EUC:

- Consider establishing a common currency for learning that recognises a project at work with the same type of credit as a learning activity at university.
- Adapt the funding model to cover both traditional three-year degree course and 'non-traditional' routes, making the latter more accessible.
- Work with PSRBs and QAA to encourage changes to course accreditation models that enable rapid reevaluation and updating of content.
- Change definitions for non-completion to make step-on/step-off degrees possible without penalising providers.
- Learn from international experience (eg Canada) to establish clear accountability and incentives for EUC and encouraging investment from employers and universities.
- Recognise the potential of EUC to improve local economic conditions, particularly in regions outside London and the south east of England, and encourage scaling up EUC activities within the context of the levelling up agenda.
- Develop measures of productivity that can help quantify the impact on economic productivity of employer participation in course co-design, delivery, and experiential learning. Current approaches tend to assess the impact of skill development at the qualification level – a more granular approach will help demonstrate the ROI of EUC activities, encouraging their uptake.

The role of technology solutions in accelerating EUC

When considering the barriers faced by universities and employers alongside our recommendations, it becomes clear that both have much to gain from working with third party technology platforms which can act as a trusted interface between them.

The easiest way to think about these companies is as aggregators of employer-university networks that eliminate much of the pain that both sides usually experience when trying to set up new partnerships.

For example, in course creation, third parties such as FourthRev can aggregate demand for industry credentials from universities, creating a viable route for industry to roll out new training programmes at scale. In experiential learning, platforms such as Riipen aggregate projects from both employers and educators in an open marketplace that facilitates rapid matchmaking, so that rolling out meaningful experiential learning opportunities becomes viable across all disciplines for their university partners.

As we have shown, some of the biggest challenges in scaling partnerships between employers and universities lie in the complexity of each individual partnership. By aggregating networks of employers and universities, EUC technology platforms directly address those challenges. In particular, tech companies can sit comfortably within the value chain of EUC, complementing the strengths of universities and employers and adding to their offer for learners. What follows is a detailed breakdown of the value chain for each model, recommendations for technology platforms on how they can best support and facilitate these collaborations, and relevant go-to-market considerations.

1. Student acquisition	2. Course design	3. Course delivery	4. Student success
Attracting and converting students; dealing with admissions	Designing course content and assessments; choosing price and target audience	Delivering the learning experience; managing a community of learners; tech infrastructure for learning	Managing employer relationships; providing pathways into jobs for students

Course co-creation and co-delivery

The role of technology platforms under this model is to create courses in partnership with industry and university, provide the technology environment to teach it, support or own student acquisition and support learners in connecting with industry.

There are two key variants to this model: the 'embed' and the 'cred' approaches. In the 'embed' variant, new courses are made available to the university's existing student population and the university owns the marketing function. By contrast, in the 'cred' variant, the courses are standalone products offered to new students. In this model, the startup owns the marketing function.

	1. Student acquisition	2. Course design	3. Course delivery	4. Student success
University	Variant 1 (embed): market co-creation modules to their existing students Variant 2 (cred): N/A	Validate course content and assessments	Optional: own parts of course delivery	Provide HE credential and support/lead student placement
Startups	Variant 1 (embed): may support marketing via on-campus reps Variant 2 (cred): fully owned marketing responsibility	Build courses in partnership with industry to meet university requirements	Own majority/all course delivery, incl. via industry practitioners. Provide work simulation platform	Provide support for student placement
Employer	N/A	Make industry credential content and assessments available for adaptation	Provide access to demo instance of industry tools to be used in work simulation	Provide industry credentials

Strategic considerations

The business model for companies operating in this space is based on commissions on university tuition fee revenue in exchange for delivering large parts of the value chain. There are three principal strategies for maximising value to universities, employers and learners:

- Understanding strategic requirements of customers to find the appropriate level of ownership of the value chain.** At the extreme, the university partner may end up simply validating the learning and providing a credential, with all student acquisition, course design, course delivery and student success owned by the provider. This reduces the workload associated with the model's delivery for university staff, allowing them to focus on other activities. Obviously, this

approach is not always appropriate, depending largely on the university's mission and strategy. Thus, instances of course co-creation and co-design will sit along a spectrum in terms of relative ownership of the value chain.

- **Delivering powerful industry partnerships.** Particularly for startups, there are benefits in focusing on emerging, in-demand skill areas that universities will be keen to offer to their students, particularly where industry credentials or certifications would add differentiated value to the student. These include cloud, machine learning, e-commerce, digital marketing, sales, UX/UI and product management. Companies can stand out by building a broad set of highly credible industry partnerships that universities would take years to build themselves.
- **Mass customisation.** Companies in this space often come under pressure to deliver highly bespoke programmes for individual university partners, which has an adverse effect on their margins and is best resisted. Instead, frequently updating content in line with advances in industry can deliver a similar level of quality and improve the long-term viability of the business (and therefore the partnerships it brings to the table). One of the university vice-chancellors we spoke to named this approach 'mass customisation'.

The source of value in these models lies in aggregating university demand for industry credentials. Key go-to-market considerations are:

- For the 'embed' variant, prioritising universities which have a track record in marketing online programmes to their existing students early on will help improve engagement and generate evidence of impact for future partnerships.
- For the 'cred' variant, student acquisition costs will be inversely related to the strength of the university partner's brand. Prioritising universities with strong brands allows generation of momentum that can be valuable in expanding to the rest of the market.
- Mooc providers such as FutureLearn and Coursera are well positioned to use their existing student audiences to provide student acquisition support for 'cred' model courses – they can be valuable partners to newer players in the space.

Experiential learning

The role of technology platforms under this model is to facilitate the integration of employer projects directly into university courses and to provide a platform to manage those relationships. At a deeper level, this is about aggregating meaningful applied learning experiences and then making it easy to move these out of the career support services and into the hands of academic staff.

	1. Student aquisition	2. Course design	3. Course delivery	4. Student success
University	Fully owned	Lead on course design and quality assurance	Own and lead course delivery	Vaildate learning and lead on ensuring student success
Start-up	N/A	Facilitate integration of employer projects into university courses through online platform	Provide online platform to manage projects at scale	Provide limited support in student placement
Employer	N/A	Design projects and provide requirements for inclusion in university courses	Deliver mentoring and project support	N/A

Strategic considerations

The business model for experiential learning platforms is predicated on generating revenue from both universities and employers. More than anything, this is dependent on being able to demonstrate the impact of these interventions. Approaches to this include:

- **Investing in impact studies.** Startups in this category should be devoting resources to producing high quality studies that quantify commercial ROI and their platforms' impact on student outcomes and graduate performance.
- **Optimising for project flexibility.** Given the variety of employers across different industries, technology providers should be making it easy for employers to create projects that fit their business and talent needs, including variable project lengths, support for online and offline projects, group projects etc.
- **Focusing on the marketplace.** What matters most to universities in this model is the company's ability to bring with it a varied and large network of employers of different sizes and from different industries. Providers can create leverage by investing in a strong and diverse network of employers and by making it easier to onboard local employers for projects 'closer to home'.

This model relies on maintaining the right balance of supply and demand as it scales. From a go-to-market perspective, one tactic is to be proactive about successively growing regional ecosystems of university and employer partners to avoid being spread too thinly.

Market map



*The logos have been scaled to represent whether the startup is roughly small, medium or large in terms of relative valuation and customer base.

Future technology opportunities

As this paper has shown, the potential for technology-enabled mass employer-university collaboration is truly breathtaking.

The disruption to 'business as usual' in the Covid-19 pandemic is all the more likely to accelerate new product development in this sector. In particular, we expect demand for short-term, vocationally oriented programmes to increase in response to the economic downturn. We expect this to impact both course creation and experiential learning models positively. Over the long-term, we can point to a number of opportunities for founders considering starting up a business in this space:

- Course co-creation and delivery (both embed and cred) products are likely to appear in every major high-growth skill category, such as sales. The likely scenario is that each skill category will end up with a small number of specialist providers that can become the key standalone players.
- Industry credentials aren't new. As an example, the Chartered Financial Analyst (CFA) Institute creates value for the financial services industries by providing an independent process for the validation of learning. Just like the financial services industry, nascent high-growth industries would benefit from independent verification bodies that credibly validate skills. We imagine industry consortia that come together to create universally accepted, industry-wide credentials for junior data scientists, cloud architects etc.
- Increased university investment in remote workplace experiences: during the immediate health crisis, startups in this category have seen increased demand from companies and universities. In the medium term, students are likely to demand more exposure to employers from universities as the job market tightens, putting universities under pressure to invest here. Employers, on the other hand, may find it harder to justify spend, which may point to business model changes ahead.
- Credit-bearing and paid: one approach that has yet to see a success at scale is one where technology platforms simplify access to a range of work-based learning activities that both pay the student and are credit-bearing. This could be either to support the delivery of specialised courses such as degree apprenticeships or to slot these activities into more established programmes. Any university able to offer such experiences would immediately stand out to students, and technology providers that enable this could grow very quickly.

Next steps

Throughout our work on this report, it has been evident that there is a real and significant appetite for extensive collaboration between employers and universities, particularly in course co-design and delivery and experiential learning, which are poised for huge growth over the next decade.

This growth would deliver enormous benefits for learners, universities and employers alike. Beyond the impact on individuals and organisations, the adoption of EUC at scale, which is possible with the rise of dedicated technology platforms, is expected to have a major impact on our society, by levelling up the life chances of students and graduates in economically disadvantaged areas, and our economy. We estimate the impact of mass adoption on productivity for EUC will add between £50 and £80bn annually to the UK economy. However, getting to this point will require concerted efforts to address barriers to effective collaboration and scale-up activities – something we hope can be achieved with the help of the recommendations in this report.

We will continue to promote the EUC agenda, working with the UK government, HE sector and industry bodies, universities, employers and technology providers to encourage the adoption of our suggestions and the development of new approaches to scaling this activity.



In the first instance, by 2023, we would like to see 50 or more such partnerships created to deliver EUC-powered courses for an additional 10,000 students. We invite all interested parties to reach out to us to discuss how they can contribute to this initiative, whether through the sharing of best practice in the UK or establishing international links.

Q&A with Shawn Lestage, director of operations at Riipen

Riipen is enabling transformative opportunities for companies to collaborate with post-secondary students on real-time, real-world challenges that are embedded directly into coursework. To date, Riipen has enabled 40,000 students at 150+ post-secondary institutions to partake in 1.5 million hours of applied learning with 5,000 companies. Riipen's mission is to help students of all backgrounds and geographies boost their skills, gain career clarity, network with potential employers and find jobs they love.



Can you describe Riipen's growth?

Riipen launched in 2016, in Vancouver, Canada, with two HE institutions on our platform. We now have close to 250 university partners and thousands of employers across Canada, the US, UK and Australia. We are the largest experiential learning marketplace in the world and our mission is to eliminate graduate underemployment by reducing the skills gap for those about to enter the workforce. Our platform connects organisations of all sizes with educators to collaborate on short-term projects embedded within curricula and co-competitions. We're focused on providing students with opportunities to develop and validate workplace skills, get feedback from employers and build their networks. We're leading a number of collaborative projects with non-traditional education providers to provide access for underserved and underprivileged groups, such as one to help immigrants in Canada build

their professional network quickly by validating their skills through experiential learning.

What role has Riipen's approach to collaboration played in enabling that growth?

We are a social enterprise and so it's the mission that we're on that gets people excited to collaborate with us and to join our team. Diversity, equity and inclusion are key for us, so we have built an ecosystem in which employers can engage for free with any institution. When we switched to a free service during Covid, we saw something in the region of a 1,200% increase in employers signing up on our platform.

We've also invested heavily in our technology. When we started four years ago with Schulich Business School in Ontario, the platform was really just a few pages but I recall a comment from someone who said every time they

logged into the platform, it got better and better. We've invested an enormous amount of time and resources into building a marketplace of experiential learning opportunities as well as our project management tools but it's been the human touch – helping people figure this out – that's helped us scale so rapidly to this point. We have onboarding specialists to make sure that new users are set up to succeed, and every institution has a relationship manager as well as someone who works with individual academics or professional services staff using the platform.

What are some of the common pitfalls that make employee collaborations particularly challenging for universities?

Misaligned expectations is key. Employers often don't understand how institutions work, what expected outcomes there are, or how to approach and collaborate with an academic or a researcher. Access is also a huge barrier, especially for small-medium businesses and nonprofits without HR budgets or campus recruitment teams. Finding the time to establish relationships and then having to duplicate that at scale is difficult. We also help employers to find talent in places they weren't expecting.

How does Riipen make collaboration easier for universities?

Our platform facilitates extremely flexible engagements. An educator can post a course or a module to the marketplace, and an employer can see that and submit a project that aligns with the learning outcomes. Or an educator can simply sign up to our platform, scroll through thousands of projects that employers have already posted and send a request to connect.

It's very intuitive and low risk for both sides and because it's cloud-based it's easy to get started. Our creation wizard allows an academic to take some or all of their syllabus and turn it into a Riipen project or module within 30 minutes, with or without the help of one of our design consultation experts. We then help with sourcing the best-fit projects and matching employers within the marketplace, and have checkpoints throughout to make sure that the engagement is running successfully. We've developed tools that allow educators to track key milestones, such as student interactions with employers and with each other. They can track submissions. We provide in-app file sharing, in-app video conferencing, and chat.

At the end, the engagement students get feedback from the employers, the employer can provide feedback to the educator, the educator can provide feedback to the employer and so on, to encourage positive outcomes in the platform.

What advice would you have for other startups trying to make it easier for universities to collaborate with employers?

It's not enough to understand the challenges that educators are facing, that administrators are facing, that employers are facing, or that students are facing. You need to have a really clear picture of each stakeholder and of how they fit and work together in order to propose a solution that makes sense. You must understand the economics of higher education and where and how your solution will add value to all stakeholders. If you can do all that, you're likely to have a receptive audience.

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About Emerge

Emerge Education is a European seed fund investing in exceptional founders who are solving the \$8.5tn skills gap. Emerge is backed by strategics such as Cambridge University Press, Cambridge Assessment and Jisc, as well as founders/investors of Trilogy and 2u. The team has a solid track record with 50+ investments, with those companies raising £100m+ from investors such as Local Globe, Stride, Project A, Rethink Education, Learn Capital and Reach Capital. Emerge also convenes Edge, a series of thought leadership forums for higher education and corporate leaders working on addressing the skills gap in their organisations and beyond. Through Edge, Emerge is able to help founders

gain unique customer insights and build defining business partnerships that help their companies grow faster.

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About Jisc

Jisc is a not-for-profit providing the UK's national research and education network (NREN) Janet, and technology solutions for its members – colleges, universities and research organisations. It is funded by the UK higher and further education and research funding bodies and member institutions.


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