The future of revenue diversification in higher education

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

Report 7

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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 students 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 underrepresented 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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Foreword

The coronavirus pandemic has upended the business of universities. Not only have institutions shifted to remote learning almost overnight, but we are grappling with grave financial challenges as domestic and global economies face what looks to be a major recession.

While initial fears about falling student enrolments for 2020/21 didn't resemble our worst-case scenarios, universities have lost other revenue while also incurring unexpected costs. To ensure survival in the short term, some institutions will need to rapidly restructure their operations. Meanwhile, the overall impact of the crisis will be large and long-lasting, and universities must prepare for ongoing operational and financial difficulties.

Covid-19 has exposed the fundamental financial pressures in UK higher education. Most providers run at tight margins and operate in highly regulated spaces, which makes it difficult to find additional margin from our core undergraduate degree market. Revenue streams outside of on-campus degrees and research still make up less than 20% of the income generated in HE.

This financial pressure undoubtedly poses a challenge – but it also presents an opportunity. From online teaching to remote assessment, from research partnerships to student mental health, universities responded to the global pandemic with speed, agility and creativity.

So far, these shifts have mostly been undertaken as a kind of revenue protection, seeking new ways of reaching the same students. Now, we need to be bolder. There are urgent demands for our expertise for the upskilling and reskilling of working professionals. Translating our excellent work into formats that can benefit these different, more diverse audiences – and make it pay – is the next step. It's time for higher education to make innovation and experimentation a core part of our operations.

This crisis has intensified a longstanding need for revenue diversification. The 1997 Dearing Report, which first recommended introducing tuition fees, talked about the need for universities to develop alternative sources of income in order to support our teaching and research. There have been countless government reports and initiatives since, most recently the 2012 HE funding reforms, which increased average university funding by 25% but distributed this money unevenly by placing even more emphasis on per-student income. Universities have explored the revenue-generating potential of many areas of our activity, from physical estates and campus facilities to business schools and continuing education departments. Identifying and pursuing the market opportunities offered by research and intellectual property has long been a priority.

Doing things differently, imagining new possibilities, developing new capabilities – this is what universities are all about, especially in times of crisis. One of the ways to do things differently is to find new people to do them with, partners who can support and strengthen our core missions around high-quality teaching and research. We must initiate conversations and bring together people from disparate worlds to explore ideas and share best practice.

This report, developed through conversations with 30+ university senior leaders, edtech startup founders and sector experts, makes a powerful case for the need to change. In partnership with Jisc, Emerge Education and HackerU, we have developed this green paper to provide a long-term vision for a financially thriving, vibrant and diverse higher education sector, and to set out the short-term steps and practical guidance that must be laid as a foundation to enable this vision. We've highlighted some leading examples of innovators from the UK and around the world, from the Open University to the University of Michigan, Guild Education to FutureLearn, which offer key lessons.

We hope that this report will stimulate thought and debate, and prepare universities, edtech startups and policymakers alike as we move into the post-pandemic world. Revenue diversification is not an end in itself. It is a way to better serve our existing students, and the students to come.

Keith Zimmerman
Chief operating officer at the University of Bath and chair of the Emerge Education action group on revenue diversification

Introduction

The number of UK universities in deficit has almost **quintupled** in the last five years

In the US around 1,200 campuses have **shut down**

Universities will be hit by a **£2.6bn shortfall** this academic year

Financial sustainability is the biggest existential threat facing higher education (HE) today. The number of UK universities in deficit has almost quintupled in the last five years, from 24 in 2015/16 to 119 in 2018/19. In the US around 1,200 campuses have shut down over the same period, resulting in the displacement of around 500,000 students. And the impact of the Covid-19 pandemic has only exacerbated this challenge. London Economics predicts that universities will be hit by a £2.6bn shortfall this academic year.

Much of the anxiety has focused on the loss of international students (which now includes EU students), whose fees provide a large and increasing share of providers' total income, generating a surplus that cross-subsidises important 'loss making' activities such as research.

But there are also losses in income from lower numbers of home students, a drop in research work and less revenue from accommodation, catering and conferencing. In this climate, traditional on-campus income sources have come under significant strain. Universities are faced with a growing and urgent need to adapt their business model.

Although much has been said about the financial problems facing HE, there is relatively little out there on what can be done to address these problems. In the aftermath of Covid-19, universities face a fork in the road: keep doing what they're doing, trying to step up existing activities and drive operating efficiencies where possible – or make the strategic choice to approach this as an opportunity to rethink, redesign and diversify their revenue streams. Today, revenue streams outside of on-campus degrees and research make up less than 20% of the income generated in HE.

There is a vast untapped potential for growth here. To make the most of this potential, we believe revenue diversification must meet three requirements. It must be:

- **aligned to the university's core mission**, focused on increasing the reach and impact of high-quality education delivery
- **sustainable and long-term**, capable of meeting the size of the challenge ahead
- **highly scalable**, which means harnessing the power of technology

Through market research and interviews, we have identified six specific areas of revenue diversification that can be scaled rapidly and effectively thanks to emerging trends in the use of technology.

Our goal is to demonstrate how **mission-aligned, technology-enabled revenue diversification** can deliver meaningful impact for HE, enabling universities to better support more students – and to consider what needs to be changed for this to happen.

In the first part of this report, we look at the growing financial sustainability challenge for universities, examine its underlying root causes and ask what will happen if universities do not invest in revenue diversification. We evaluate the three strategic options available to university senior leaders – scale existing activities, drive operating efficiencies and diversify revenue streams – and we define a vision for mission-aligned, technology-enabled revenue diversification as the best opportunity to address these financial challenges and unlock significant growth through opening up new models and markets.

In the next part of the report, we look more closely at six emerging models of technology-enabled revenue diversification. To illustrate the different approaches and trade-offs more clearly, we focus on six case studies which highlight first-hand insights, examples of best practice and specific opportunities for universities and technology startups to work together.

In the final part we ask, how do we move from here to there? What are the key barriers that need to be overcome to realise this vision? How can universities identify their key capabilities and the optimal revenue diversification strategies to pursue? And how can edtech startups tailor effective solutions and maximise their impact?

The financial sustainability challenge for universities

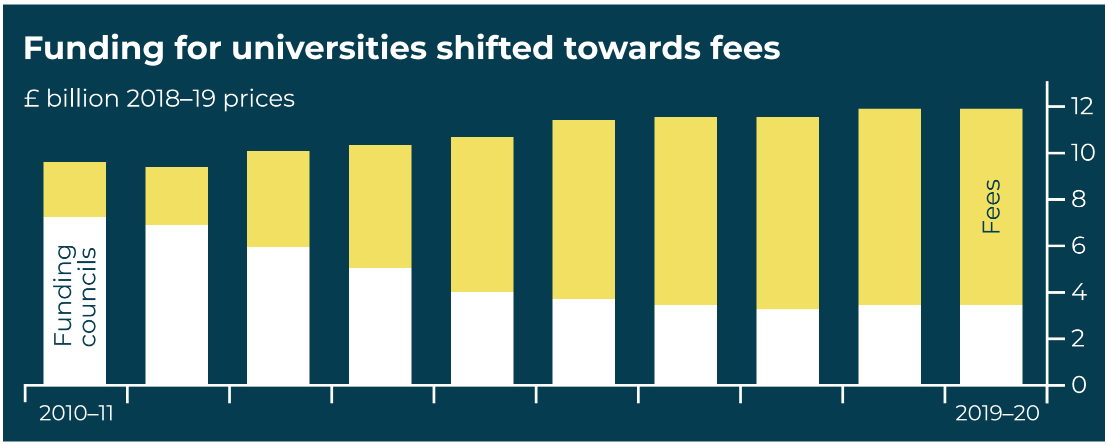
What will happen if universities do not invest in revenue diversification?

The Covid-19 pandemic has brought into focus the high stakes of HE's financial sustainability challenge. Universities are facing enormous losses across a range of income sources and investments. The consequences threaten to be dire. These losses could cause serious financial problems, including – in the extreme – insolvency. Most institutions will be left with reduced net assets, which could increase financing costs and will leave them less well placed to cope with future adverse shocks. All this will change the shape of the university landscape as we know it.

But the underlying factors have been pressing for some time. The IFS found recently that the likelihood of insolvency due to Covid-19 depends more on an institution's financial situation before the crisis, rather than on predicted losses from Covid-19.

There are five fundamental root causes behind the trend of declining financial sustainability of universities in recent years:

- **Fundamental changes to university funding** – in both the UK and the US there has been a seismic shift in university funding, from government sources to student tuition fees. The size of this change in the UK can be seen in the graph below. Ultimately, these changes have significantly altered the market dynamics of HE, and have created a reliance for universities on tuition fee income. In the US, this has been particularly problematic as college enrolments have declined for eight consecutive years.



- **Policy constraints** – alongside the decline in government funding, the regulatory environment for universities in the UK has consistently toughened over time. Policy changes have often made it more difficult for universities to adapt and grow, including the recent re-introduction of student number controls and removal of the home fee status for EU students in the UK. Universities lack financial autonomy to optimise their assets or invest in financial markets, though lenders are keen to work with the sector.

- **Rising pension fund deficits** – according to the IFS, the biggest source of ongoing financial risk for universities is escalating pension costs. Reduced interest rates and depressed returns mean the deficit on the main university pension scheme increased from £3.6bn in March 2018 to an estimated £21.5bn in August 2020, pushing university liabilities ever higher. Without favourable movements in volatile financial markets, it is unclear how universities could significantly reduce this risk. Further reductions in pensions provided by the scheme, rises in employee contributions, or some combination of these measures, would all be hugely unpopular with staff, who have voted for industrial action on this issue three times since 2018.

- **Slow adaptation to market needs** – many universities have been slow to adapt in line with the rapidly evolving needs of students and employers. For example, it takes more than 18 months on average to develop a new undergraduate course, and the typical refresh cycle for a course is close to five years in the UK. This has led to the rise of 'faster and cheaper' alternatives from employers (such as Google) and new providers (eg Lambda School) who have been able to create and update courses at a much faster rate.

- **Limited commercial capabilities** – despite the growing need to serve students as consumers, the commercial capabilities of universities can at times be limited. This can lead to significant challenges around commercial decision-making and profitability. For example, almost all undergraduate courses are marketed at the same price to the UK student population, despite extreme variances in the relative profitability of delivering these courses. Based on the current model for course delivery at UK universities, the average cost of provision exceeds the UK tuition fee for most undergraduate courses.

The impact of Covid-19

The financial stability challenge is expected to intensify as a result of the Covid-19 crisis. The IFS predicts long-run losses of between £3-19bn due to Covid-19, with a 'central scenario' prediction of £11bn. This is larger than five years of surplus at the pre-pandemic level. The majority of these losses are initially expected to stem from a decline in international student recruitment and increases in the deficits of university-sponsored pension schemes.

In the 'central scenario' modeled by the IFS, 13 universities educating more than 100,000 students are expected to become insolvent in the absence of a government bailout or debt restructuring. In the US, McKinsey predicts that losses resulting from the pandemic could total up to $19bn from a decline in undergraduate enrolment alone.

But the pandemic also presents potential opportunities, such as for universities to engage with non-traditional audiences by retraining those who have been furloughed or become unemployed. From degree apprenticeships and workforce development to new product development partnerships and bespoke collaborations, universities are uniquely positioned to use their expertise to help businesses and learners understand and solve their evolving skills needs (and gaps).

Three strategic options

Based on the current financial position and capabilities of a university, senior leaders have three strategic options available to address their financial sustainability challenges:

A. Scale existing activities – approximately 80% of university income is generated from 'traditional revenue streams', defined here as on-campus degrees and research. As research is typically a subsidised activity for UK universities, growth in enrolment and retention rates for on-campus degrees will be required to increase net income through these 'traditional revenue streams'. Given the lack of profitability for most UK undergraduate courses, the potential impact of this revenue stream will be highly dependent on international student recruitment in an increasingly competitive market.

B. Drive operating efficiencies – reducing costs through operating efficiencies can also help to improve financial health. The most common option here is to target staff costs, as they represent more than 50% of the cost base at both UK and US universities, with notable increases over the past five years.

C. Revenue diversification – outside of on-campus degrees and research, universities generate revenue from a range of alternative sources, including online education provision, commercialisation of physical assets and investment returns. For example, before the pandemic, online learning constituted 8% of all UK HE provision, and an estimated £2bn was generated each year from letting student accommodation.

Most institutions will need to pursue a combination of two or all three strategic options to effectively address their challenges around financial sustainability, but several emerging trends mean that revenue diversification presents the greatest opportunity for growth.

This is because there is limited scope for universities to scale existing activities to the extent demanded by current circumstances. Traditional revenue streams are flatlining, as the number of domestic undergraduate students has seen little to no growth in the UK in recent years, and has even declined to a record low in the US. Prior to the pandemic, international enrolment for on-campus degrees was under threat from rapidly rising global competition. These tuition fees are now facing unprecedented risks, and the threat of global competition is expected to increase in the coming years. The growth potential here is limited.

The second option for universities is to reduce costs by driving operating efficiencies. Although this strategy has increased in importance as universities come under greater budget constraints, this option presents potential risks for the delivery of a high-quality education experience while also offering no potential for growth.

"Our cost base is rising and our income base is flat, because tuition fees are flat. The only way out is growth."

Catherine Burleigh, director of financial and legal services, Oxford Brookes University

Revenue diversification is the only strategic option that presents a significant opportunity for increasing university income in a way that is aligned to higher education's mission.

The future of revenue diversification will be characterised by a shift from the commercialisation of physical assets to new online offerings.

So far, revenue diversification efforts have typically focused on the commercialisation of physical assets such as student accommodation, labs and technology for industrial demand, conferences, and catering operations. The use of pathway providers to increase international student enrolment and retention has also been a popular option for many US and UK universities. These options for maximising income streams are quick and relatively straightforward to execute on a small scale. But while some universities have been more successful in these spaces than others, these revenue streams, as a whole, are limited in the context of growth opportunities, particularly following the onset of the pandemic.

On the other hand, technology-enabled revenue diversification presents significant opportunities for growth, as demonstrated in the US where enrolment on online courses has more than quadrupled in the last 15 years. At an institution level, the realisation of this growth potential can be seen in the case of Southern New Hampshire University (SNHU), where online enrolments have grown from 3,000 in 2003, to a staggering 132,000 in 2019. As a result of these trends, larger numbers of universities are viewing new and innovative technology-enabled course offerings as a key driver for growth.

The benefits of technology-enabled revenue diversification

… for mission

Technology-enabled revenue diversification offers the greatest opportunity for universities to grow income sustainably, and to expand the reach and impact of HE's civic mission. For example, the University of Bath has found that partnering with Wiley to provide online postgraduate degrees has helped the university share its world-leading teaching with hundreds more learners worldwide.

Some institutions, such as Southern New Hampshire University (SNHU), Arizona State University and Groupo Tirandentes in Brazil, are investing in early stage edtech companies to combine their pedagogical expertise with entrepreneurial insights to support the most impactful innovations in teaching and learning. Meanwhile, the Open University's partnership with FutureLearn to offer microcredentials has helped diversify its learners, build capabilities and accelerate innovative social learning across digital platforms.

… for learners

Technology-enabled revenue diversification presents significant opportunities for universities to benefit new groups of learners. Universities need to be looking at what they can offer new, non-traditional learner demographics, including international students, students that are looking for flexible online study options, lifelong learners and corporate clients.

"HE has historically struggled to serve non-traditional learners, but we have to do better. We have a moral obligation to create pathways back into education, particularly in this moment of crisis."

Terah Crews, vice president of learning marketplace solutions, Guild Education

Some universities partner with education brokers, such as Guild Education, to connect directly with employers, so that in-work learners who are looking to upskill, reskill or change careers can benefit from up-to-date, rigorous courses. But revenue diversification is not just about chasing new markets. It can also help universities better serve existing students. Both the University of Michigan and the University of Miami use immersive workforce-ready professional programmes, powered by HackerU, to offer learners a cutting edge in fast-evolving fields such as technology. Institutions in the Council for Christian Colleges & Universities have found that course sharing on Acadeum improves student satisfaction and retention, as well as offering expedited paths out of academic probation, alternatives to interrupted study, and accelerated routes to graduation for high achievers.

These benefits and more will be explored in our emerging best practice case studies in Part 2.

PART 2: The emerging models of technology-enabled revenue diversification

Summary

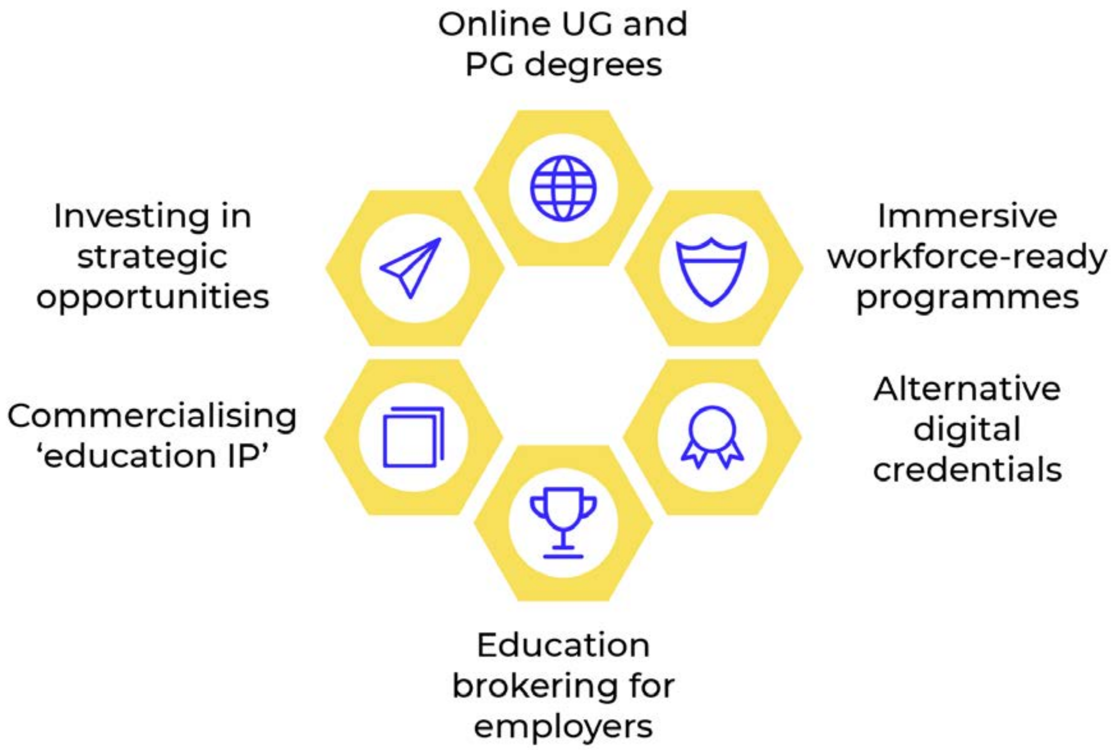
The revenue diversification taxonomy

There are six key models of technology-enabled revenue diversification that can be deployed to grow revenue significantly without relying on traditional on-campus tuition fees. Crucially, all of these models scale revenue, mission and learner impact for universities.

The growth in income they enable is inseparable from the benefits they offer to new and diverse groups of learners who have traditionally struggled to access higher education.

The key takeaway is that technology-enabled, mission-aligned revenue diversification is the option with the highest growth potential for universities.

The emerging models of technology-enabled revenue diversification are:



1 Online undergraduate and postgraduate degrees

This includes the transitioning of existing degrees online, and the creation of brand new online degree offerings. Online education is already a core revenue driver for many universities; according to the National Center for Education Statistics, more than 28% of all postgraduate degrees in the US were taken fully online in 2018.

However, universities have not tended to focus on undergraduate programmes because the traditional undergraduate student's preference for an on-campus experience outweighs the benefits of online provision. As the addressable market of 'non-traditional students' – eg mature and working students – has grown, so has the online undergraduate degree become more viable.

Although this is the most mature revenue diversification model, with a number of well-established 'online programme managers' (OPMs), Holon IQ predicts that the online degree market will more than double from $36bn in 2019 to $74bn in 2025. Significant growth is expected in future years as this figure only represents 3% of the projected HE spend in 2025.

2 Immersive workforce-ready professional programmes

This model constitutes intensive, immersive and targeted 'bootcamps' focused on improving student employability in specific disciplines, often marketed at professional audiences. The average length is typically 12 to 26 weeks, though bootcamps can be shorter or longer, and these programmes offer the opportunity for universities to create incremental revenue by attracting learners who are looking for career progression or career change but do not have the ability or willingness to commit to a one to two year postgraduate programme.

The number of students graduating from these programmes in the US has grown by a factor of 11, from 2,178 in 2013 to 23,043 in 2019. In 2019, the University of Birmingham and the University of Manchester were the first HE providers to launch bootcamps in the UK.

3 Alternative digital credentials

This model refers to all credit-bearing short online courses outside of degree programmes, including microcredentials that can be 'stacked' and act as a pathway into undergraduate or postgraduate degree programmes. Like bootcamps, these courses are usually career-oriented and more affordable than full degrees.

However, unlike bootcamps, these courses are credit-bearing, as universities typically struggle to compete with MOOC providers on the cost of non-credit bearing short courses and seek instead to offer learners the benefits of HE quality assurance.

Rather than cannibalising existing demand, credit-bearing short courses can be a compelling choice for professional learners who are considering a degree but don't have the time or money to commit to one right away, which enables universities to attract a more diverse group of students. Short courses will increasingly funnel learners into full degree programmes. This model has seen rapid growth in demand, with one in four US universities now offering digital skills badges, and 73% stating that alternative credentials are "strategically important to their future", according to Pearson and UPCEA.

4 Education brokering for employers

This refers to the establishment of employer partnerships to deliver higher education for current employees. Although the number of part-time, mature learners in HE has continued to fall in the UK, there is a growing opportunity for universities to address the ever-increasing upskilling and reskilling needs of employers.

The realisation of this opportunity can be seen in the US, where 35% of the university population is aged over 24, and this segment is expected to grow much faster than the number of students aged 18–24.

5 Commercialising 'education IP' for other institutions

This model entails the licensing of one university's educational courses, content and/or pedagogy to another university or education provider. Specifically, students from one university will be able to access a course or content from another university while still remaining enroled at their original institution.

This enables universities to cross-sell and increase their revenue in a highly cost-effective way, without the need to launch brand new product offerings. As global enrolment in HE is expected to double and reach 400m by 2030, this model creates an opportunity for the >90% of students that attend ‘unranked’ institutions to access content from the world’s leading universities.

6 Higher-risk strategic investments

In line with regulatory requirements, not-for-profit universities in the US and the UK have the opportunity to make strategic investments that are aligned with their charitable purpose: the advancement of education. A popular example of this is investment in spinouts, which has seen a 13x increase between 2013 and 2018 according to Global University Venturing.

The first three categories are, in many ways, part of a ‘combined story’ where the future of HE rests, in part, on multi-modal resilient options for lifelong learning, with pay-as-you-go stackable credentials. This pathway starts with open educational resources which are then pulled together, marketed and delivered in a targeted way to benefit a wide range of learners.

The widespread shift to remote learning induced by Covid-19 has rendered online provision less of a differentiating factor in itself, but in the vast majority of cases this was an emergency response to an unprecedented situation for universities, characterised by delivering existing courses in as effective and equitable a way as possible. There is much more to explore here.

Market map

There is, therefore, notable variance in the maturity of the six technology-enabled revenue diversification categories listed above, with large numbers of third-party providers operating across online degrees and alternative digital credentials, and fewer companies offering solutions across the remaining categories. We have identified some examples of the leading and emerging players in technology-enabled revenue diversification in the market map below.

Note: the sixth category, investing in high-risk strategic opportunities, is not facilitated by technology providers and so has not been included in the market map

Based on interviews with a number of institutions, we can illustrate each of these six approaches to technology-enabled revenue diversification with a short case study reflecting the revenue diversification strategy and experience of the universities under the lens. At an institutional level, the starting point depended on the maturity of each university's income generation and revenue diversification strategy, its goals for the immediate period and its institutional values.

Universities seeking to diversify their revenue streams face a number of barriers, but there are indications that some of the technology-driven changes shaping the post-Covid future of HE finances are already reducing those barriers, moving the sector closer to the 2030 vision of revenue diversification that is aligned to the university's core mission and is sustainable and highly scalable. The range of challenges highlighted by these approaches offers an insight into the issues that need to be tackled in the medium term and the opportunities they present for long-term financial growth.

Emerging best practice

As the above examples show, technology-enabled mission-aligned revenue diversification offers universities significant opportunities for innovation and impact. In order to better understand emerging models and provide inspiration to universities wishing to make the most of these opportunities, we have collected examples of best practice from across the UK and US.

1 Online undergraduate and postgraduate degrees - University of Bath and Wiley Educational Services

What is the University of Bath's revenue diversification strategy?

To build on the University of Bath's consistently strong performance on student satisfaction and graduate employment in independent league tables, the university developed an initiative to increase postgraduate taught numbers and widen its international reach.

The university wanted to serve students who couldn't take full advantage of campus-based offerings, such as adult learners seeking career-oriented courses while juggling jobs and caring responsibilities, or international students deterred by the cost and logistics of moving abroad.

In 2017, expanding online postgraduate provision became a strategic priority. Two years later, the University of Bath launched its first fully online master's degree programmes: MSc Applied Economics (Banking and Finance), MSc Computer Science, and MSc Entrepreneurship Management and Innovation. Two more courses were added in 2020/21, including MSc Business Analytics and MSc Artificial Intelligence.

What is the role of Wiley Education Services in delivering this strategy?

Wiley Education Services, a division of Wiley, the global publishing company, is a leading, provider of tailored services and technology solutions to higher education institutions. It currently partners with more than 70 institutions across the US, EMEA and Australia to support 800+ degree programmes and more than 3,000 courses, encompassing online, on campus and hybrid models.

Wiley works with the University of Bath to support the development of its online masters programmes and implement their delivery, as well as providing technical and non-academic student support. Dr Florin Bisset, deputy director of undergraduate admissions and outreach and head of learning partnerships office, explains that Wiley collaborates with teaching faculty to “take your academic material, transfer it and translate it into an online lesson”. Wiley also leads on recruitment and marketing the online masters programmes in the UK and internationally, with the university reviewing and approving all recruitment strategies and marketing campaigns.

What are the benefits for the university?

- **Return on investment**

The agreement between Wiley and the University of Bath is on a long-term basis, as this offers a better opportunity for return on investment. It is based on a revenue share model. This initiative has helped achieve the university’s strategic aim of increasing postgraduate taught student numbers without putting additional demand on campus facilities. By the end of 2020, around 700 students had been recruited to the 100% online masters programmes – “students who may not otherwise have been able to access Bath’s high-quality learning and teaching,” says Dr Bisset.

- **Learner impact**

Wiley already had other UK university partners when it started working with Bath and so understood the university’s needs around quality assurance in a UK academic framework. As soon as a unit is run Wiley starts a review process, and it also provides continuous technical support 24/7 for students, which is important for online students studying in different time zones. Students from more than 80 countries have enroled into Bath’s online programmes.

Dr Bisset emphasises that Wiley “has a good ethos”, which is vital to the partnership: “It was important that the online programme manager (OPM) see students as people and that they have a caring aspect in their student support”. The courses are designed to maximise flexibility, allowing learners to step out when they need to, take a study break and then return. The courses have not yet run through to graduation, but for this learner demographic, typically mid-career professionals with family who cannot otherwise access campus degrees, being able to benefit from top university courses should have an impact on their careers: “They are here for a purpose and are very focused.”

What were the main barriers in implementing this model? How were they overcome?

The university set up a rigorous procurement exercise to identify its partner in online education. It was clear about its priorities and requirements from the outset and set up a tender panel involving 20 people from across the university, so that a comprehensive range of stakeholders could actively contribute.

The university created a Learning Partnerships Office to manage the partnership with both the OPM provider and academic departments centrally. This streamlines communication and ensures a consistent approach. The Learning Partnerships Office also manages many aspects of academic administration and ensures adherence to quality assurance procedures.

For Wiley's partnership director, Anna Wood, this form of management contributes to the success of the project: "The partnership, which spans diverse academic disciplines, is managed by a central office, which offers a centralised approach to communicating with the many university stakeholders needed for such a partnership quickly and efficiently; it supports development of consistent processes, ensures identification and implementation of good practice across the university, and allows efficient identification, prioritisation and management of risk."

2 Immersive workforce-ready professional programmes - University of Michigan and HackerU

What is the University of Michigan's revenue diversification strategy?

At the University of Michigan Engineering, the focus in recent years has been on diversifying portfolios for online engineering and professional education audiences. "We are in strategic alignment with the educational mission of Michigan Engineering to find ways to anticipate and provide engineering education for the common good," explains Diane Landsiedel, executive director at Nexus, Michigan Engineering's central unit for online and professional education. "Our strategy is to offer programmes and services that increase accessibility and maximise the impact of Michigan's educational resources, to address the unmet needs of a more diverse audience of lifelong learners around the world." It is a fundamentally mission-aligned and learner-centred strategy, especially around inclusivity and more equitable provision.

What is the role of HackerU in delivering this strategy?

It's difficult for universities to stay relevant in cybersecurity, web development, programming and similar fields due to the fast-evolving nature of digital technology. Dan Vigdor, founder and executive chairman at HackerU, emphasises that when a university embarks on external partnerships, they are trusting a provider with its brand and so, in addition to open-door communication and joint decision-making, "they must have complete oversight on our instructors, on our curriculum, on all the marketing. The main point is the trust". By leveraging HackerU's additional resources, universities can expand their student base and target non-traditional audiences, including early career and working professionals.

What are the benefits for universities?

- **Return on investment**

HackerU offers turnkey service solutions, such as marketing, student acquisition, student support (including weekly progress appraisals), employment placements and career services. An in-house programme would require design and development, faculty compensation, and ongoing redesign and maintenance, in addition to significant resources for marketing and operations. These resources are tough in good times, and impossible during the current economic crisis. At Michigan Engineering, cybersecurity classes already had waiting lists so "we looked for other ways to meet this need," says Landsiedel. HackerU was fast to market and took away the risk of initial development costs: "the outstanding curriculum with real-world examples was already developed, plus they had expert instructors and innovative online simulations and labs that would have exceeded our internal program development and delivery resources had we attempted to do this on our own. With this partnership in place, we were able to launch this important programme during the global pandemic".

A 30-hour, low-cost introductory course enables learners to test the programme before committing, while HackerU can use this preliminary stage to assess whether learners have the passion, aptitude and commitment for the extended programme. Learners who pass the introductory course exam and evaluation are invited to take the full 400-hour programme - a vetted, two-part admissions process that helps ensure retention and completion are high. Nexus at Michigan Engineering will also measure the number of people who are placed in sustainable, long term jobs. The University of Michigan is exploring options to cross-fertilise the cybersecurity bootcamp to enhance its traditional on-campus education. Landsiedel explains that faculty members are "considering how we might leverage the HackerU curriculum to increase the number of practical skill development opportunities for traditional, on-campus students." Nexus is piloting a revenue share model with engineering departments to incentivise this kind of engagement, allowing academic units to use the revenue for investment in related programmes.

- **Learner impact**

At Nexus, the target audience is online graduate students, full-time engineers already working in industry or government, and alumni of Michigan Engineering, "because our alumni look to us to help them stay on the leading edge of their fields". Any programme Nexus develops or runs must have "leapfrog characteristics" to really benefit those learners: to "provide a depth of knowledge, satisfy a need that's not being met, and take a new approach that will have the greatest positive impact on the engineering community, whether that's local or global." From the learner perspective, high-quality immersive workforce-ready professional programmes provide new skills that can be developed over a short, intense timeframe that they can apply directly to the workplace – what Landsiedel calls "'just in time' reskilling and upskilling learning opportunities". Learners earn a reputable credential that is recognised by potential employers and valued by students as a formal recognition of their new career-oriented skills.

The full HackerU programme takes place part-time over eight or nine months, giving students the chance to work and learn simultaneously. Students also benefit from HackerU's support system, including a dedicated 'student success manager' and a career services team, who organise professional networking events and interviews to connect learners with local and national hiring partners. "It's not like the MOOC model with its very large numbers of learners who sign up, study at their own pace and never talk to an instructor," says Landsiedel. The cybersecurity bootcamp emphasises learner engagement, immersive outcome-based learning, and frequent interactions between learners and instructors throughout the experience." HackerU also places emphasis, says Vigdor, on "really tailoring for what the university needs". Detroit is a car manufacturing hub leading the way in a rapidly-evolving industry so, for its partnership with the University of Michigan, HackerU added a course in the curriculum on cybersecurity, driverless cars and the internet of things, so that graduates would be more fitted to the local employment environment and prepared to lead this industry in the future.

What were the main barriers in implementing this model? How were they overcome?

"Nexus has learned a lot from piloting this third-party partnership and business model with HackerU. Establishing the framework for the partnership was an important priority," reflects Landsiedel. Part of this framework was implementing best practices to welcome cybersecurity learners into the Michigan Engineering community. "In order to understand and get to know the learners better, we thought a best practice would be to enrol them in Nexus' registration database. But due to an internal financial policy involving third-party revenue sharing, we reconsidered." In response, HackerU created a new enrolment system, customised with a welcome from Nexus at Michigan Engineering and replicating Michigan's payment support plans for students.

Landsiedel also talks about overcoming initial concerns from multiple stakeholders, including key members of the engineering faculty, senior leadership and administrative experts "about whether HackerU was in alignment with the university's expectations and standards around quality for instruction and curricula." HackerU visited the Ann Arbor campus to present an in-depth curriculum review and then provided the full curriculum to an engineering faculty review committee for blind evaluation, where it was judged and approved for Michigan Engineering's professional education portfolio. "Establishing what each stakeholder is trying to achieve – What are their visions? What are their goals? What are their motivations? What are their definitions of success? – really helps build the foundation for an effective partnership," observes Landsiedel. "Creating a regular mechanism to evaluate and improve the partnership is essential to ensuring its long-term sustainability."

3 Alternative digital credentials - Open University and FutureLearn

What is The Open University's revenue diversification strategy?

Central to the founding mission of The Open University (OU) is creating "truly open learning opportunities" by using innovative pedagogy "to meet learners around the world at their points of need," says Tim Plyming, managing director of short courses and microcredentials. To this end, the OU provides a range of opportunities to learn, from free short courses, podcasts, articles, interactive activities and videos (some as part of its partnership with the BBC), right through to undergraduate and postgraduate degrees – many of which saw record demand during the pandemic. Microcredentials are another emerging facet of this. "If we talk about the importance of lifelong learning, reskilling and the learning interventions you need all the way through life to equip you for work, then short courses are incredibly important," says Plyming. "We see these short learning interventions as being a key part of our offering, and therefore central to what we are mandated to do, and to delivering on our mission."

What is the role of FutureLearn in delivering this strategy?

The OU launched FutureLearn, a social learning platform, in December 2012 with a dozen UK university partners to test opportunities offered by digital learning and massive open online courses (MOOCs). Rapid growth means that FutureLearn now has more than 200 global partners, including a quarter of the world's top 250 universities and more than 15 million learners. The platform, now jointly owned with the SEEK Group, offers short online courses right through to postgraduate diplomas and certificates, and fully online degrees, all designed around social learning.

In February 2020 the first microcredentials were launched on the platform, covering areas in cybersecurity, online teaching, teacher development and business management. By the end of November more than 900 learners had engaged. Most of these microcredentials are worth 10-15 UK credits, 4-6 ECTS credits, or 2-3 US credits. (In early 2020, FutureLearn announced its involvement with the Common Microcredential Framework and these microcredentials adhere to its criteria of requiring 100-150 hours of part-time study, generally over 10-12 weeks.)

By February 2021, FutureLearn was promoting 33 microcredentials, seven of which are offered by the OU. Launching new courses results from a collaborative process, where every month the OU's team responsible for identifying new product development opportunities meets with FutureLearn to discuss market trends in demand for learning, training and recruitment. Plyming explains that "the partnership is really important to us, especially in maintaining a level of accessibility that matches our mission".

What are the benefits for the university?

- **Return on investment**

The OU has its own VLE, to support core curriculum, and an open platform with free resources, but Plyming explains that "FutureLearn gives us an amazing opportunity to reach a very different demographic from some of our existing channels: a much wider international demographic, a slightly different age demographic, and a slightly different gender split".

FutureLearn's strong emphasis on industry partnerships has also brought the OU into contact with more employers. It has built on existing long-term relationships with industry partners such as Cisco, with whom a cybersecurity short course has been developed that has both academic credit and industry endorsement. The OU has been able to reach people "who might not have thought of themselves as university or OU learners, but could experience OU services in a different way".

The OU's partnership with FutureLearn has also "really helped us accelerate our social learning pedagogy," says Plyming. "It's improved our understanding of how learners want to interact and learn on digital platforms, particularly mobile. It's allowed us to test and innovate in a way that we couldn't have done properly at the same speed on our existing channels." In February 2020 the OU launched its first microcredential aimed at teaching professionals, Teacher Training: Embedding Mental Health in the Curriculum. The Covid-19 pandemic created a high demand from the teaching profession for courses in how to deliver online learning and so, building on that first microcredential, the university responded rapidly, producing and delivering three more microcredentials in quick succession to support teachers to develop their skills in this area.

- **Learner impact**

The value of academic credit, for the OU, is to provide learners with "evidence of demonstrable knowledge in a particular skillset or capability, for which a level of assessment is important". This is especially significant if learners are taking short courses as part of employer-funded professional development, or self-funded as a way to facilitate career change. Feedback from learners emphasises the importance of up-to-date learning that is applicable to real-world situations.

But Plyming emphasises that microcredentials are not a one-size-fits-all model. It's about finding what's fit for purpose for a particular learner, based on their individual needs and requirements. "A certificate of achievement from an industry endorser is fantastic for some people. There are a range of options and we will, over the next couple of years I think, shake out a lot of the relative value among options like certificates of completion, digital badges, formula assessments, credit ratings, non-academic assessment ratings from an industry partner, and more."

What were the main barriers in implementing this model? How were they overcome?

One of the OU's core priorities was around how to leverage the passions, research and pre-existing industry partnerships of academic teams, and bring that together with industry data to develop short course curricula. "We've entered into that in the spirit of collaboration," reflects Plyming. "I think the mistake would be to see it as a binary decision: do you follow what the academic community wants to pursue, or do you follow a demand-led approach? Actually, the answer is somewhere in the middle and if we go back to our mission, to meet learners at their points of need, then understanding the skills and capabilities that learners want to engage with is really important."

The OU is now looking to the future potential of alternative digital credentials, such as stacking micro-qualifications. "It's not been our focus so far," explains Plyming, "because what we have to do first is build scale and range. There aren't enough courses in the market to be able to do that at the moment, but that feels naturally like stage two, and the potential there is really exciting."

4 Education brokering for employers - Wilmington University and Guild Education

What is Wilmington University's revenue diversification strategy?

Wilmington University, which has its main campus in New Castle, Delaware, has a mission to educate working adults seeking advancement by providing relevant, career-oriented curricula taught by advanced practitioners in various fields. Its revenue diversification strategy includes academic and corporate partners, and direct enrolment from adults of all ages on shorter courses focused on new job opportunities, career changes or career progressions. As a private, nonprofit organisation, Wilmington University does not seek federal or state funding and relies primarily on tuition revenue.

What is the role of Guild in delivering this strategy?

Large numbers of employers are willing to invest in university courses for their employees. However, these corporate learning and development budgets are not easily accessible for universities because building deep relationships with employers can be highly resource-intensive. Guild brings together leading Fortune 1000 employers, such as Walmart, Chipotle, Discover and the Walt Disney Company, with universities, community colleges and skills-based learning providers (such as Pathstream) to establish and manage a marketplace of partnerships offering education to employees. By acting as an interface between large employers and education partners, Guild provides universities with direct access to learners in the workforce and the sizable training budgets of global corporates.

Terah Crews, vice president of learning marketplace solutions at Guild, explains that these learners require extra services for which the traditional HE model wasn't necessarily designed. "Often we think about working adult learners as one big group, but it's actually a very diverse demographic: it's students who started college, dropped out but then came back; it's first-time, older working adults; a large portion are parents or have caring responsibilities." If universities are to serve all these needs, "it's going to require investment — money but also time and talent, to reconfigure strategy, infrastructure, programmes and relationships. The scale of that investment would depend on how mature the institution is in serving these markets, but institutions need to go in eyes wide open. Intermediary organisations like Guild are the fastest way to get to that."

Crews explains the advantage of a marketplace is "we're not necessarily looking for one institution to serve all those needs perfectly." In a learning marketplace of options, "every institution has different capabilities that they can bring to bear. And then we do the matching with the employers based on what they want, what their needs are, what their goals are, and find the right programme."

> *"Companies don't want one institution, they want a marketplace of institutions."*

Guild never designs or redesigns curriculum, but it helps connect employers, who tend to know best what skills they need, with leading learning providers who have the best course design and pedagogy for delivering those outcomes. What are the benefits for the university?

Creating partnerships with employers that bring in new groups of working students is challenging, even for universities that already have a corporate strategy. "It requires not just building relationships, but infrastructure to be able to serve them," explains Crews. "The cost of entry is very high in terms of resource, talent, infrastructure, sales and marketing, all the other things — there's really significant financial investment before you start reaping rewards, and it's hard for universities to justify that level of spending."

As Dr Eileen Donnelly, vice president of enrolment management at Wilmington University states, "Wilmington University has worked directly with corporate partners for years. However, Guild provides an effective way to work with corporate partners nationally. By offering higher education opportunities to working adults outside the mid-Atlantic region, Guild expands our reach."

It is also expensive for universities to invest in the marketing required to seek out and enrol working adult students. Guild supports enrolment by bringing students who are financially backed by their employer to cover the cost of tuition and who are highly motivated and qualified; its curated catalogue, significant coaching infrastructure and guidance ensures students understand their benefits, apply for the right programme and meet the admission criteria. Guild also streamlines the administrative process of enrolling employer-sponsored learners by facilitating direct tuition payments from employers.

But Guild doesn't seek to be simply a "plug and play" provider. Its learning design teams consult with member institutions, offering data-supported insights into the industry trends and skills employers are looking for so that institutions can design their own offerings to fit known skills gaps. For Crews, "this gets to the core of our belief that we need to not just work with institutions, but help build their capacity to do this themselves." This then enables universities to effectively pursue collaborations with, for example, smaller employers in their local economy.

- **Return on investment**

The Guild partnership offers "several benefits" for Wilmington. "Guild understands the distinctive needs of its corporate partners and communicates those needs to academic partners. This affords us the privilege of developing curricula that genuinely benefit working adult learners nationwide." Guild also offers coaching to assist employees in achieving a work-life balance. That matters professionally and personally to students juggling myriad obligations, but it also benefits Wilmington University's retention numbers. These working adult learners are committed to and excited about completing their degree programmes. Additionally, the partnership inspired Wilmington University to develop new offerings, such as English as a Second Language (ESL), specific technology courses, and many other career-relevant degree and certificate options that offer students advantages in the competitive global marketplace.

- **Learner impact**

Personal coaching and support services are provided for every learner – including gathering ongoing feedback about their experiences and needs – which has led to higher student satisfaction, course completion and re-enrolment rates. (Guild's six-month retention rate is 93%, compared to 56% for non-engaged employees.)

In Guild's experience this kind of tracking is even more vital when working with non- or post-traditional students. "Most of higher education was not designed for learners that aren't 18 to 24," says Crews. "Higher education is a rollercoaster at the best of times and if you're a parent, if you are first generation, if you're an immigrant, the highs in some ways feel even higher but those lows..." But this doesn't necessitate a complete rebuilding. Instead, Guild thinks about "the strategic interventions that we can offer at key points, to smooth out the biggest steps. Coaching is a great example of that, a shortcut on an institution's way to learning what this new population needs and creating a great experience to serve them."

What were the main barriers in implementing this model? How were they overcome?

Crews emphasises that “Guild is probably your right partner if you’re chasing very large companies, but if there’s a company over here that has 2,000, or 5,000 employees, you should go after them yourself.” Universities shouldn’t assume that it’s an either/or decision between doing it yourself or working with a provider, especially one with a collaborative ethos of capacity building as well as learner acquisition. She cautions that, “if universities are going to partner, make sure you’re getting the double bottom line value out of it and figuring out how this can push broader capability development”.

Employer-university collaborations can take many forms and every institution needs to think about it in their own way, but the key point for Crews is “any institution that wants to do this, there is now a pathway. They don’t have to break new ground; they can find examples that enable them to do it in a way that is right for them.”

5 Commercialising education IP - CCCU and Academeum

What is the revenue diversification strategy for the Council for Christian Colleges & Universities?

Mission is central to the CCCU, a global higher education association dedicated to “advancing faith and intellect for the common good”. This means that strategies which seek to generate revenue, boost enrolment, commercialise course content and operate more profitably must, above all else, reinforce the association’s core values of Christ-centred education.

What is the role of Acadeum in delivering this strategy?

Acadeum established a consortium of more than 300 institutions which share courses with each other to aggregate demand and fill under-optimised capacity. Since 2017, more than 50 CCCU institutions have partnered with Acadeum to facilitate online course sharing between members.

The platform plays no role in course design and teaching is all delivered by institutions. Acadeum offers a course reservation system, helping universities maximise revenue from under-enroled courses by marketing and selling empty seats to learners elsewhere. As of December 2020, they have facilitated more than 9,300 student enrolments.

"We're bringing capacity that already exists to places that can use it," explains Nathan Green, Academ's co-founder and chief development officer." Colleges can move about freely on the platform; they can set their own prices, according to their own research. We're really there to help institutions accomplish their goals."

Academeum also simplifies the administrative processes of course registration and transferring credit, so a student can take a course from another institution but receive the credit from their home institution. A student at Cornell College, Iowa, for instance, can take a Franklin University course but get the credit from Cornell. The platform is learning management system agnostic, able to move data seamlessly between different student information systems. Students cannot shop for courses themselves – they need university approval to take a course – but Acadeum aims to reduce the burden on registrars by collating options and assisting with course review and approval.

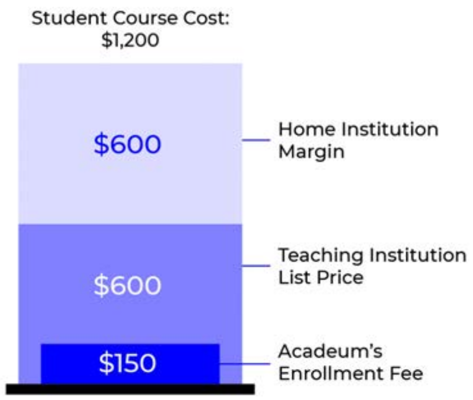
What are the benefits for universities?

- **Return on investment**

Historically, higher education has solved enrolment problems by creating new programmes, but Rob Manzer, chief academic officer at Acadeum, explains that "programme optimisation is actually the most efficient way to develop a new or save an existing programme you would otherwise close, through sharing capacity". For example, Texas Wesleyan University was able to offer its World Religion course with only three of its own students when it added 15 students from other institutions through Acadeum. This is cheaper than recruiting adjunct teaching cover, a vital consideration when balancing faculty contingency planning alongside a desire to preserve the maximum diversity of course offerings for students.

The consortial model enables universities to scale their reach and compete more effectively by offering a wider range of courses than they can themselves teach, while commercialising their existing courses. Acadeum charges a small licensing fee and 25% revenue for each seat they sell (the industry average for similar aggregators, such as Hotels.com, is 30%).

- Teaching Institution sells course at a discounted rate (ex. $600)
- Home Institution determines student price and bills the student (ex. $1,200)
- Home Institution retains the margin as incremental revenue.
- Academeum receives 25% of the Teaching Institution revenue.



Dr Ted Song, coordinator of diversity and innovation at John Brown University (JBU), was keen to explore whether new majors could be created out of partnership. “We sometimes lose out on students because we don’t have majors in X, Y, Z. You can always add new faculty and add classes, but we all have limited budgets, so how can you expand academic programmes without budget implications?” JBU identified two potential new majors - Cybersecurity and Criminal Justice - by adding eight and six new classes respectively.

Rather than risking new hires on unproven courses, and in order to move quickly, JBU used course sharing to guarantee the required classes for students throughout their degree. In autumn 2020, Cybersecurity had six applicants and Criminal Justice had 26. Course sharing, then, can act as scaffolding to get a new programme started and once it’s sustainable an institution can invest further.

As the Covid-19 pandemic renders digital capability an ever more pressing concern, sharing is the least expensive and time-consuming option for universities to expand the number of online courses it offers (compared to building in-house or buying in a third-party online programme manager). “Sharing is the lightest lift”, insists Manzer, “and it’s where institutions can unlock trapped value. What we’re trying to accomplish is getting institutions into online quicker, cheaper, with quality control (because the course is already running elsewhere), and we do that so that the students can make progress”.

Universities are also increasingly aware of the potential for alternative credentials and microcredentials to make their graduates more marketable, but, says Manzer, “there’s also a recognition that alternative credentials by themselves don’t necessarily get young people where they need to be from an education standpoint, in terms of developing critical thinking skills and communication skills. So our institutions are very interested in how they can have more success from a student marketability standpoint but stay true to their own model”.

- **Learner impact**

As well as vastly increasing the study options for students beyond their home institution’s core teaching specialisms, the biggest benefits are around student satisfaction and retention. Course sharing provides options for low grade recovery – to date, 80% of students obtain grade C or above in Acadeum courses – which means expedited paths out of academic probation, alternatives to interrupted study, and accelerated routes to graduation for high achievers. Because it’s a consortial relationship, Acadeum courses function as home courses, meaning, among other things, that students can apply for financial aid.

The biggest opportunity, according to Green, is for institutions “to move from a passive stance on student progress to one that’s much more active in pre-empting and solving their problems”. This involves changing expectations around monitoring student progress. “We always ask an institution, ‘what’s your retention rate goal?' Because why aim for 70% when you could aim for 100%? The term progress is proactive; retention is reactive. You're never going to get above 80% if you're reactive; we say, here's how you can be proactive and focus on progress".

Working with students and advisors, Acadeum tracks learners' weekly progress and ensures that they complete their first assignment by the add/drop date. Using Acadeum, Eureka College, Illinois, improved freshmen retention 6.5%, and Ferrum College, Virginia, improved freshmen retention 6% and sophomore retention 7%.

What were the main barriers in implementing this model? How were they overcome?

The main barrier is organisational culture; it feels counterintuitive for universities to promote courses from apparent competitors to their own learners. Green insists this hesitation springs from good intentions: "the idea that each university has to create all the courses that their students take comes from their conscientiousness about their own curriculum and from their faculty's desire to teach students". But he insists that "if you look at just the facts, no institution, even the largest public university, is capable of meeting all their students' needs and creating all the courses that students can benefit from".

Barb Bellefeuille, vice-president for academic services at Bethel University, explained that "at first there's scepticism from faculty, because there are fears around whether this is a way to not hire. But very quickly our faculty pivoted on that and realised there were ways to instead leverage this". She speculated that Bethel may have secured faculty buy-in more swiftly because it began as a teaching institution - "we were already offering 15-18 majors online, so for us to open up those seats made a lot of sense". Faculty then saw that "being able to control what our students get was very attractive, and to be able to identify it as our course and have it apply to their GPA has made quite a difference for us".

Dr Song reiterates the need to involve faculty in the approval process from the outset. "Without support from the department it's almost impossible so you have to have some low key conversations here and there to explain the intention, and work with them". He emphasises, "we're not trying to replace our current faculty. It's an expansion of our mission; if we don't have these majors, these students don't come. Helping our faculty to see how this fits the mission that we have already was helpful".

The key, says Green, is "universities must understand that sharing is the fastest and most cost-effective way to go online. It is simple game theory: universities are under-enrolling, but also don't have the resources to teach all courses required". While there are some administrative burdens – each university must pre-approve each course to confirm that they will accept the credit, which can take three to four months and present a range of challenges – this is significantly shorter than the approval process for new courses, which can take years. Bethel ran Acadeum seamlessly alongside their existing OPM. “We determined that any course offered on the Acadeum consortium that was ‘touched’ or designed by Wiley, we would pay them a small 5% fee for that course”, says Bellefeuille. “The OPM didn’t attract those students, so we’re not paying for that, but we’re paying for some design.”

Dr Mark Mountain, university registrar at Olivet Nazarene University, said “it’s great to have courses where we know what is being taught and the perspectives those courses are coming from; students aren’t just picking a course out of thin air that’s convenient”. But there is a significant convenience factor: “The platform is very user-friendly. Our students didn’t have any problems working through that.” ONU treat Acadeum courses as transfers for review purposes, “so we are evaluating the student’s request in our normal process, even though that course in the end is going to be treated as an institutional credit. That helped us to know we already had a process in place, and helped us catch a few students that wanted a course they didn’t need.” ONU price Acadeum courses slightly higher than home courses, to make clear they are not replacements, but ensure parity when using Acadeum to enhance their summer term offering.

Strategically, course-sharing is not about replacing content but complementing and supplementing existing provision. Manzer speculates that “our model, we think, is that missing link between the MOOC and the schools; ultimately our network allows them to begin to integrate premium content into their programmes in a way that they’re completely in control”. The future may involve bringing higher education into closer contact with adjacent educational spaces, such as delivering dual credit courses and credit-bearing MOOC courses.

6 Higher-risk strategic investments - Southern New Hampshire University, Arizona State University and Grupo Tiradentes

What are Southern New Hampshire University, Arizona State University and Grupo Tiradentes’ revenue diversification strategies?

Southern New Hampshire University (SNHU) invests the majority of its endowment and capital reserves in physical estates and technology, but the university also wanted to create a more mission-aligned revenue diversification strategy. It was keen to gain meaningful engagement with edtech entrepreneurs as a way of staying on the cutting edge of trends and innovation. By investing in early stage edtech companies, the university can combine its pedagogical and sector expertise with entrepreneurial insights and knowledge to generate long-term returns for the institution.

A similar logic underpins ScaleU, the functional edtech accelerator based at Arizona State University (ASU). ASU enterprise partners noticed that the university's support was a major factor in the success and growth of early stage companies, but the university wasn't leveraging its support of those companies in a way that would also benefit ASU.

In 2020, Brazilian university Grupo Tiradentes invested $1m in Emerge Education's edtech seed fund. For Marcelo Adler, Grupo Tiradentes' chief financial officer, "Emerge brings a huge global network that adds important knowledge to our education group and also participates directly as part of our strategic planning, showing trends that are affecting education. In turn, we offer them new perspectives on Latin America. Our investment is more than finance return. It is strategic thinking."

What is the role of Rethink Education and Emerge Education in delivering these strategies?

Jan Lynn-Matern, founder and partner at Emerge, says that venture capital investments are more than just a financial proposition: "Universities operate in a very competitive market, which is subject to various external and internal factors – whether that's digitisation, changing consumer attitudes or the changing labour market. It is important for institutions to stay ahead of the game, and funds can act as an innovation radar".

Only a proportion of any fund's investments will make a significant impact, so for Lynn-Matern "it's not only about the particular companies the fund is backing. It's more about access to the fund manager, our team and our wider network – partnering with a group of people that are thinking about cutting-edge innovation in this space". He cites McKinsey's theory on the three horizons of growth. Horizon one maximises core current activities, such as running courses efficiently, in the knowledge that these will mature and die off eventually. Horizon two is near-term innovation, turning revenue generating activities into profit centres, such as moving further into the adult learning market. Investing in a venture capital fund is about access to horizon three ideas: "how do we set up a skunkworks, where crazy people come up with radical new ideas that will create the profit centres of 10 years from now, but for the next few years it's going to be loss making?"

In 2017 SNHU created a $15m seed fund with Rethink Education, a US-based venture capital fund, to invest in edtech startups tackling some of the most pressing challenges in education, including access and affordability. The initial investment was modest and the university's primary purpose was insights into edtech trends. Now, seed investments, typically about $250k to $750k, are made at the earliest stage in a company's development to help fund preliminary operations, including research, development, prototyping and market testing. SNHU also helps seed funding recipients incubate their ideas with their own education innovation experts within Sandbox ColLABorative, SNHU's internal consultancy and incubator of new and alternative business models of higher education.

Since 2015, ASU's ScaleU has invested in 21 edtech companies, with amounts ranging from $10k to $100k, though the majority have been around $25-50k. Bennett Dwosh, director of strategy & venture acceleration, explains: "the idea was, we have a little bit of capital to use, and we have the expertise to be successful at it. ScaleU isn't making large-scale leading investments in seed rounds; it's just trying to make smaller bets, with the intent that this is a proof point to our success in being able to support this ecosystem, and that we could in future be larger players if it made sense". It has also contributed to reputational success for the university, which has been ranked number one in the US for innovation for the last seven years. "This is just one element of the idea that ASU is willing to press the envelope. It is pushing us to work more collaboratively and strategically around, what are the biggest challenges in HE right now? What are the biggest priorities?"

What are the benefits for universities?

- **Return on investment**

SNHU has a certain ROI target but the driving factor is "the futuristic insights that you're more likely to get from early stage edtech entrepreneurs than anyone else", says Don Brezinski, senior vice president and university chief of staff. "When you consider typical vendor relationships, you're getting a product pitch and there's not a lot of insight about what they're thinking as they're developing the product. We want to go deeper and get meaningful insights into these organisations. We thought that if we could take a nominal amount from our endowment to invest here, you create a different relationship and it gets far richer insights". Investing later stage could offer greater near-term ROI from a purely capital standpoint, but early stage investment offers a more strategic advantage. The venture looks specifically for entrepreneurs in education who are mission-driven and solving a need that the university would benefit from having a partner in.

Lynn-Matern estimates that the average ticket in a seed fund ranges from $2m to $5m, though he stresses that "funds often make exceptions to their minimum thresholds if they want a partner on board". For Lynn-Matern, the level of risk depends on a university's focus: "If you're thinking about it as a financial investment, it is very high risk, but if you think about it as an investment in learning, the learning is almost guaranteed if you have decision-makers that know what they're doing and that want to engage. So it's very low risk as a learning opportunity."

- **Learner impact**

For Brezinski, “these are opportunities to inform what’s coming next”. SNHU isn’t a research institution and these investments do not impact the academic curriculum immediately, but the university is always trying to “look around the corner. The consistency here is our mindset. Covid isn’t creating a new world, it’s a very volatile accelerator of trends that were already bubbling up, and futuristic insights from emerging companies can help inform what our future could be like”. As part of the university’s mission, SNHU is driven by a desire to invest in its learner population. One urgent area of investigation now is around the potential for micro-learning to scale up continuing education offerings and the university’s ability to serve underrepresented populations.

At ScaleU, which unlike a traditional accelerator or incubator is built to test pilot-ready products in ASU units, Dwosh has seen “technologies we’ve sourced, worked with and piloted really make an impact enabling the university to better serve its 150,000 degree-seeking learners, and its hundreds of thousands of non-degree-seeking other types of learners”. One goal is that every student will have experiential learning as part of their degree, regardless of programme, which was catalysed partially by ScaleU’s collaboration with Riipen. In autumn 2020 ScaleU ran a small pilot with Ensightful, a project management tool that helps students and faculty connect through group projects; this will be scaled across dozens of courses in spring 2021.

Grupo Tiradentes hasn’t yet purchased from any companies in Emerge’s fund, but its active engagement with the portfolio has still seen benefits to learners. During the pandemic, the university asked Emerge to map the expertise of companies across the higher education spectrum; Emerge then ran a virtual workshop with 100 employees to introduce them to potential partners. After the pandemic, Emerge will run an on-campus workshop with teaching staff and students.

What were the main barriers in implementing this model? How were they overcome?

As a private, nonprofit university, Brezinski thinks SNHU “has more freedom, and the decision-making processes are leaner; we can move a whole new programme in months, as opposed to years”. The board has recently been reduced in size, from around 20 to 12, with members selected for expertise in given areas, so that investments are fully mission-aligned and can source ideas and challenges from the wider institution. “It is responsible and accountable on due diligence, but there’s fewer layers involved. The board is in tune with this kind of activity, and its culture aligns with this culture”

Private universities may have some advantages when it comes to agility and an appetite for risk-taking – in the UK, we might think of the University of Buckingham’s pioneering two-year degrees and venture creation programmes, such as the BSc in Business Enterprise. But Brezinski thinks this is an issue of brand – “how one defines oneself” – as much as governance: “Protecting the brand is important, but if you say ‘we do things this way and this is the way of doing it’ then you put shackles on because you build a structure around that and structure drives your performance. If instead your philosophy is ‘we’re about putting students first’, that enables change, and enables curiosity, and then you can build the structures to make it happen.”

Brezinski also emphasises the need for patience. “For organisations that have some trepidation about venturing into the new, you can get stick if it doesn’t work out immediately. Our board knew that there would be some hits and some misses, but that there was a bigger game to be played here. We were ok with making some less sure bets and having some patience with this nominal investment going forward. Also, fortunately, Rethink Education has had more hits than misses, so the returns have been pretty good.”

ScaleU has found that barriers also have the potential to generate innovation: “One company, K16 Solutions, actually learned as they were working with the university how challenging it is to migrate between learning management systems, and so they created a migration tool just through solving problems that our university was having”. Dwosh cautions, “I don’t think that any university could just start this tomorrow and be successful at it. You could obviously passively make investments in companies, but this real deep collaboration of trying it, investing in it, supporting it, helping the companies grow, being a partner – it takes work and an institutional appetite for trying new models”.

Lynn-Matern agrees that “the thing you need in order to be successful at this model is a strategy – a vision for where the university wants to be, the concrete steps to take and the sacrifices or opportunity costs involved in getting to that aim. To get anything out of investing in a fund, you have to be super focused, because otherwise no one’s empowered to do anything with the ideas. A strategy, across the organisation, empowers people to make decisions.” This direction needs to come from senior leadership. One barrier for public institutions, who often don’t have large endowments and can’t use retained profits, is finding pots of money to invest. “Discretionary investments are not typically a budget line, so it’s something to discuss with the board, and for the vice chancellor and provost to be behind”.

To have a truly significant impact on HE's financial sustainability challenge, universities must innovate their revenue models and that innovative mindset must become embedded as standard practice.

We believe that the most significant barrier to this currently is the absence of a clear roadmap that speaks to the needs and strategic considerations of universities, and helps them to navigate the perceived risks and barriers to revenue diversification.

The question isn't so much *what to do* as *how to do it*.

In this part of the report, we will look at some of the ways universities can identify technology-enabled revenue diversification strategies with the most potential for their own particular circumstances. Our aim with these recommendations is to equip universities to establish successful new mission-aligned, scalable and sustainable revenue streams.

The right fit: finding a university's optimal strategy

Our research shows that although each of the technology-enabled revenue diversification strategies we have identified presents significant opportunities for growth, the extent of this potential will vary based on the specific capabilities of each university. This will be affected by factors such as:

Brand strength and selectivity

The strength of a university's brand can be measured through league table rankings, which in turn correlates closely with selectivity. In an increasingly marketised and digitised environment, the importance of brand has continued to increase as the most 'prestigious' universities can dominate market share without being limited by physical constraints. This is particularly applicable for online degrees and alternative digital credentials where students prioritise university and faculty reputation when picking a university.

Financial reserves

This reflects the current endowments of a university, its property position and its ongoing profitability. This capability is important as some forms of revenue diversification require up-front investments from the university. For example, higher-risk strategic investments will require a university to have strong financial health, including significant unrestricted reserves.

Geographic location

Alignment with student demand and employer needs are often key determinants for the success of a university course. Geography plays a key role here, as most students complete (on-campus and online) courses at universities within commuting distance, and the majority of graduates go on to take up employment within the local region of their university. Therefore, student demand for all courses, including online programmes, will typically be higher for universities located in more densely populated regions.

Agility and appetite for innovation

In a rapidly changing HE landscape, the most agile universities have seen significant growth. Revenue diversification requires strong appetite for innovation from leadership, and an agile culture across the institution. This varies greatly both within and across different universities, with 'self-sustainable' institutions and departments (eg self-funded continuing education departments) often leading the way. By definition, agility is a prerequisite to success in revenue diversification, as each of the six strategies require new capabilities and ways of working.

Based on these existing capabilities, the HE sector can be segmented into three separate high-level categories, with different optimal revenue diversification strategies for each category:

Comparative advantage across revenue diversification strategies by segment

	Top tier universities with limited agility and appetite for innovation	Mid-tier universities with large local populations and strong regional employer demand	Mid-tier universities with immense agility and appetite for innovation
Key strength	**Brand**	**Geography**	**Agility**
Strategies with a clear advantage	Online degrees Commercialising education IP	Bootcamps	Investing in high-risk opportunities Alternative digital credentials
Strategies with a potential advantage	Alternative digital credentials Education brokering for employers Bootcamps Investing in high-risk opportunities	Alternative digital credentials Education brokering for employers Online degrees	Bootcamps Education brokering for employers Online degrees
Strategies with no advantage		Commercialising education IP Investing in high-risk opportunities	Commercialising education IP

Top tier universities with large endowments and limited agility

The top-ranked universities typically have the largest endowments and the lowest need and appetite to adapt. These institutions are well-positioned to expand their online course offerings and attract large numbers of students by leveraging the strength of their brand. For example, the London School of Economics (LSE) deployed this strategy by partnering with 2U, the online programme manager (OPM), to roll out a suite of 13 short courses in 2019. The success of these courses then led to the extension of this partnership and the launch of seven fully online undergraduate degrees in 2020.

Mid-tier universities with large local populations and strong regional employer demand

Many of the universities that are found between 100–500 in global rankings are located in cities with relatively large populations and strong employer demand for specific skills. The local geography can be turned into a strength for these universities by delivering online courses and professional programmes that are directly aligned to the needs of the local economy. For example, the University of Wisconsin-Madison has established a successful partnership with HackerU, the digital skills bootcamp provider, to deliver in-demand and up-to-date courses on cyber security and digital marketing.

Mid-tier universities with immense agility and appetite for innovation

For the remaining universities that are not placed in the top 100 rankings, and are located in regions with relatively lower populations and employer demand, agility and appetite for innovation is critical to the success of their revenue diversification strategies. This can be seen in the case of Coventry University, which has risen >200 places in the QS global rankings over the past five years while also growing tuition fees by 33% – a figure that is second only to University College London (UCL) in the UK. This continued growth has been powered by a range of strategies that include: expanding the number of campuses, investing in digital infrastructure such as Aula to enhance the student experience at scale, and partnering with third parties such as FutureLearn to expand its online course offerings.

The above categories are not exhaustive and there are large numbers of universities that fall into other categories, such as lower-ranked universities, and institutions with neither a geographical advantage nor a strong appetite for innovation. For the universities in these categories, the impact of the identified revenue diversification strategies is likely to be more limited.

Checklist for universities

In addition to the four factors identified above, a number of further strategic considerations remain for universities who wish to explore the potential for revenue diversification, identified through a series of stakeholder interviews.

Here, we outline some of the other issues that universities must take into account when deciding on how they can use technology to develop or scale up revenue diversification initiatives – and we explore some of the initiatives they can adopt to mitigate the common barriers.

Strategic considerations

- **Cultural challenges** – for universities, some of the key considerations identified by our interviews include the differential in perception of revenue diversification's importance across different areas of the university (for example, continuing education vs history), a lingering suspicion around commercial activity among some university staff, and gaps in both digital and 'soft' skills required to work with external partners.

- Related to the above, there is **incomplete data around ROI for revenue diversification.** For example, comparing the total cost of researching, building, delivering and maintaining online courses in-house against partnering with third-party providers. Revenue diversification initiatives sometimes require significant upfront investments of money and time, while costs tend not to be subject to economies of scale. Third-party providers may play a role overcoming this barrier, as they absorb some of the setup costs and underwrite much of the financial risk. However, while the revenue-share model used by many third-party providers can improve transparency, it does mean that the university takes a reduced percentage of future income.

- **Mode of delivery** – universities have traditionally focused on working with OPMs to deliver a very small proportion of their courses online. Following the pandemic, our research with 40+ university senior leaders on their long-term digital strategies highlights that the shift towards online is here to stay. However, most universities have yet to ascertain what shape this will take and whether this paves the way to work with providers on transitioning all their courses towards a distributed learning model, which would enable universities to deliver a high-quality learning experience for all students regardless of their location. Universities need to identify the courses that, if opened up to a wider range of learners, will have the biggest impact on student experience and outcomes.

- **Ability and desire to deliver 'non-traditional' courses** (ie not the three-year undergraduate degree). This will help decide whether revenue diversification-powered initiatives aim to use existing courses (the 'commercialise education IP' model) or generate new pedagogical content. This requires a rethinking of curricula to identify opportunities for the delivery of microcredentials for current and new student populations.

- **Alignment of courses with the university's mission and USP.** The university will need to articulate the value proposition not only to current and prospective students but also to staff and other relevant stakeholders.

- **Operational complexity**. Many existing revenue diversification models are operationally complex and resource-heavy to implement. For example, the management and delivery of courses to hundreds or even thousands of learners working remotely and flexibly, to suit their own schedules, is extremely difficult for universities to support.

  Similarly, the validation of new courses or changes to existing ones can be a slow process that fails to keep pace with industry needs in subject areas like IT. Here, too, third-party providers may play a role in meeting some of the challenges.

- **Partnerships.** Some interviewees pointed to the potential for collaborative working to maximise reach and impact across a range of functions, from teaching and research to enterprise. Partnerships offer opportunities for universities to maximise returns on educational investments and access economies of scale.

  Although course sharing partnerships have predominantly been focused on specific regions and local consortia, there is a growing opportunity for cross-border collaborations. This is likely to become increasingly commonplace as more countries adapt regulations, and enable more flexible funding and credit transfer options.

  "From expanding and complementing existing teaching provision to exploring innovative collaborative models for building doctoral supervisory capacity in Africa, there are all sorts of high impact projects that you can only do when you have the kind of scale that large institutions working together on the same thing can bring."
  Jen Angel, director of international strategy and planning, King's College London

- **Governance.** There is not typically a culture of procuring startup technology at UK universities, which can lead to extreme risk aversion, so the robustness, efficiency and agility of existing processes can significantly impact a university's ability to maximise its relationships with third parties. Providers sometimes spoke of the delays involved in consulting with large numbers of stakeholders.

Strategies to address barriers

- The key need is to **adopt a whole-institution strategic approach to revenue diversification 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 revenue diversification at the senior leadership level. Crucially, our research suggests that this should not be the responsibility of a single individual or team, but should instead be adopted by the full senior leadership team with the intention of disseminating cultural change within the entire organisation.

- **Introducing revenue diversification indicators/success metrics** within university documents, as well as identifying which current success metrics revenue diversification activities are likely to contribute to and putting in place ways to track its impact on these metrics. In our interviews, some emphasised that many revenue generating activities were currently not being recognised as such within existing accounting taxonomies, and that catch-all accounting terms such as “other income” are too imprecise.

  Details such as how you break down revenue streams on a balance sheet will create behaviours around diversification and scaling up. Consistency here can help to ensure a complete picture is painted of the full range of activities going on in UK universities.

- **Re-evaluating procurement culture.** Risk managers and well-formed project management offices can provide reassurance to governing bodies and help universities clarify their risk appetite. Business plans often require time to show benefits, but in a flexible operational environment mistakes can afford opportunities for long-term learning, so universities need to develop a different risk framework.

  One vital component of successful partnerships is establishing upfront what happens if the venture doesn’t succeed immediately, identifying actors with decision-making power who can respond quickly and pivot to find what works.

- **Ensuring staff appointments and training are informed by the focus on revenue diversification** - for example, hiring with a focus on procurement and contracting skills; providing professional development opportunities to address soft skills gaps; training academics in intellectual property and ownership, to allay their concerns.

- **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). While revenue diversification efforts tend to start in continuing education departments, universities need to decentralise decision-making processes and disseminate commercial behaviours throughout the institution.

Communicating incentives to academics. There can be residual suspicion among teaching and research staff about commercial ways of thinking. Our interviews suggested that the most effective way to overcome this is to emphasise revenue diversification's alignment with the university's mission and frame discussion around the question of "what are universities for"?

Revenue is what is required for a university to fulfil its research and teaching vocation. Emphasise that any money made is recycled back into research and teaching.

Articulate a clear 'menu of options' for revenue diversification that follows a consistent process but allows for 'variation around the spine' to recognise differences across subject areas. Ensure there is a clear message around the ROI those options would deliver, both to the university and to the learner. This strategy should be supported by robust follow-up evaluations to ensure that it is meeting market needs.

Set out clear success definitions for partnerships from the beginning and a way to continuously track metrics, with service level agreements and clear roles for each party. Universities have the opportunity to be more entrepreneurial and flexible on contracting with third-party providers to ensure they are not 'locked into' partnerships that are not delivering the right outcomes.

"By creating more than just commercial relationships with these companies, by creating collaborative co-development partnerships, we're able to find partners that are aligned with our mission and create real value in the relationship. Technologies that we've piloted, worked with and brought to the university have been able to make a significant impact for learners."

Bennett Dwosh, director, strategy and venture acceleration, Arizona State University Enterprise Partners

Checklist for third-party providers

Here, we outline some of the factors that providers must consider when formulating their offerings and approaching universities, in order to maximise their value for both institutions and learners. We also explore some of the initiatives they can adopt to mitigate the common barriers.

Strategic considerations

- **Student experience.** This is the critical factor for HE, and needs to be equally important for partners. At the core of any offering must be a genuine student-centred gap or need. A proposition focused on business challenges will feel more transactional. Providers should instead emphasise the mission-oriented and learner-centred impact of revenue diversification as well as the financial implications. Focus on small and specific solutions, rather than a one-stop-shop. This will demonstrate the alignment of incentives to potential partner universities.

- **Contextualise any offer within a broad understanding of the wider HE landscape.** Depending on their strategic ambitions and the resources they have available, some universities may look to partner with a provider only to deliver a single, discrete project. But a broad understanding of the sector and its emerging trends is nevertheless vital to establish credibility. In this instance, a deep and broad relationship can be built over time through trust and success in the partnership. Other universities, especially those who are targeting rapid growth, may find it beneficial to consolidate various activities with one trusted partner who can offer a broad menu of capabilities.

"At Kaplan, we believe that partnering with a smaller number of universities and focusing on building substantial, deep and broad relationships is where success lies. People ask us, 'What type of university do you want to work with: public or private, large or small?' But for us, it's all about identifying those that have the right leadership team, and about where a university is going in terms of growth and innovation."

Brandon Busteed, president, university partners and global head, learn-work innovation, Kaplan

- **Understand strategic requirements of universities to find the appropriate level of ownership of the education value chain.** At one 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 support 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 providers need to be aware of the extent to which universities wish to engage with co-creation and co-delivery. Being very consultative in early days will be key to understanding the nuances of your initial partners.

Mission-aligned organisational culture. The underlying theme for providers is: how do you translate market demand into willingness from university senior leadership and academics? Despite widespread awareness of the need to change, the majority of universities place little to no emphasis on revenue diversification relative to the delivery of on-campus degrees and research.

But this does not mean providers should assume that all universities are slow, risk-averse and unwilling to adopt new models. In order to fundamentally shift this mindset, and take advantage of this market opportunity, providers must understand what motivates universities and clearly demonstrate a 'double impact'. That is, their solution must not only present a significant opportunity to increase revenue, but also enable the university to scale its impact across existing and previously untapped groups of learners.

Go-to-market approach. Focus on not just the most established brands, but also the most differentiated universities. Exclusivity is core to the value proposition of top tier degree programmes, and this creates challenges for scaling online degrees. This presents an opportunity for less selective universities to reach large numbers of learners by establishing a clearly differentiated brand (eg focusing on a specific discipline).

One key consideration, however, might be that student acquisition costs will be inversely related to the strength of the university partner's brand and/or whether the university has a track record in marketing online programmes. Prioritising universities with a strong presence early on will help improve engagement, generate evidence of impact for future partnerships, and create momentum that can be valuable in expanding to the rest of the market.

Remember the university's reputational risk, and the way that component features of their brand can affect a university's appetite for engagement, in addition to brand strength and selectivity. For example, if you plan to work with a research university, it is important to respect this and find ways for this to inform your offering. It is also worth being mindful of the fact that universities have good reason to be very protective of their brand, given the media attention new initiatives can generate.

Deliver powerful industry connections. Providers can stand out by building a broad and varied network of highly credible industry partnerships that universities would take years to build themselves. There are benefits in focusing on emerging, in-demand skills areas that universities can market to students, particularly where industry credentials or certifications would add differentiated value to the student. This will help link learning content to employability outcomes.

Pay close attention to local market needs. Perhaps unexpectedly, the early marketing scope for several of these models, such as bootcamp programmes and online degrees, will be local, as this is where the university's brand will have the biggest impact on learner acquisition.

According to a 2019 study by Learning House, 67% of students in online programmes study within 50 miles of home. Therefore, providers should pitch and launch programmes for which there is strong skills demand from local employers, and strong local search demand for learners.

The potential impact for these programmes to benefit the local community is a key driver that can influence adoption from universities. Having said that, OPMs currently do little to help universities take advantage of the enormous opportunity to serve learners in emerging markets, which will add 200 million new HE learners by the end of the decade.

Strategies to address barriers

Our research has found that universities consistently emphasise the **importance of alignment with the university's mission and its learning objectives.** Third-party partnerships must advance the university's mission and strategy, not just provide an opportunity to grow revenue. Providers should make recourse to a language of shared goals and values, and ensure that they are clear about how they can deliver benefits across the education value chain.

For example, many third party providers have delivered significant value in online student acquisition, particularly for adult learners and new demographics that typically sit outside of the traditional focus of a university.

Pay close attention to the procurement framework, and start with a pilot to address universities' low-risk appetite. As part of this, you can then find the right champion within a university who is in a decision-making position and can drive the vision forwards. University senior leaders recommend that third-party providers hire instructional designers rather than account managers, so that they are actually involved in implementation.

Provide investment upfront. Given the risk-averse nature of universities, it can be challenging to secure investment for new and untested product offerings. Providers can overcome this by signing a revenue share agreement and providing the upfront investment required to launch a programme.

Demonstrate clear learner impact and ROI. Providers can add value here by providing robust analytics, such as showing clear career outcomes, increased learner acquisition, or improved retention rates. Bringing high-quality case studies with other university partners into the procurement process can also be a real differentiator, to help universities understand past successes and demonstrate impact, as financial committees want to work with companies who have proven capabilities.

Forming a consortium of university partners and building a community can be crucial early on, so that they can learn from each other and build trust in your product.

Strong pedagogy is vital. One of the biggest blockers can be securing approval to award credit for content not produced by that institution, which is anchored in universities' longstanding role as guarantors of pedagogic quality. Providers can expedite this by establishing robust approval processes, aligned to the needs of their university partners, and proactively establish greater trust.

Each element of the programme must be grounded in best practice learning techniques, and underpinned by the collection of regular student feedback to inform continuous improvement.

Learning should be evidence-based and measurable. This is particularly true when scaling programmes to tens of thousands of learners and hundreds of instructors. It's essential to maintain the same level of high quality instruction through robust teacher training, and the close monitoring of analytics to ensure a consistent experience for all learners. Because tuition fee revenue is proportional to completion rates, it makes sense to invest in a high-touch learner support model whereby learners are coached through to course completion.

Provide seamless systems integration. Partner universities need to be able to securely share student data, enable student access across different LMSs, and align a complex range of course timetables. This is only possible through integration of tech stacks across different institutional systems and procedures that involve the "lightest lift" from university administrators.

Q+A with Dan Vigdor, founder and executive chair at HackerU

With more than a decade's experience as a global premier digital skills and cybersecurity training institute with origins in Israel, HackerU partners with educational institutions around the world to power tailormade workforce development programmes for diverse learners and build digital technology ecosystems in local communities.

Adapting to market needs has been identified as one of the root causes behind HE's declining financial sustainability. What role can partners such as HackerU play in helping universities respond in a faster and more agile way?

Colleges and universities face a number of challenges, and adapting to market needs driven by the digital economy is chief among them. It's difficult to keep pace with the latest technology - and even harder to stay ahead of these trends to properly prepare the future workforce with the knowledge, skills and experience needed to be successful. HackerU conducts ongoing research and development to ensure our programmes deliver the latest, most relevant training and education. We've enlisted a network of global industry experts to serve as our advisors, and they help guide programme design and curriculum development. As a result, we're able to identify and address new needs as they emerge, and adjust our programmes accordingly. Higher education has always been a driving force for research, education and innovation. That hasn't changed. Partners like HackerU help colleges and universities continue that legacy.

How do you facilitate engagement with new learner demographics that typically sit outside of the traditional focus of a university?

HackerU designs these university programmes to provide a pathway for anyone to pursue a career in digital technology. There are no prerequisites for education or work experience. As a result, these programmes attract a wide range of students. Some are young professionals preparing to launch a new career in digital technology while others are working professionals using the programme to upskill or change careers. We embrace all types of students and believe that no one should be left behind in the digital economy. The one common denominator for all of the students is that they're career focused. They want to learn practical knowledge and skills that they can use. We've designed every programme to drive engagement, with a focus on hands-on application. This includes the student selection process, which helps students decide if they're on the right career path. It also includes our instructors, who are selected for their industry expertise and then receive ongoing training and development. Our focus on application also informs our programme design and curriculum, including business simulations and real-world projects designed to help prepare students to hit the ground running.

What have you learned from your work with universities that has fed into your own research and development?

Our university partners are a big part of the HackerU community. We are constantly learning from them as they share best practices and suggest new programme opportunities. The most important thing that we've learned from our university partners is that the student always comes first. Our partners are committed to the student experience, and they have decades of experience to draw from. They entrust us with that relationship, and we do everything to honour that trust.

How have you helped evolve your university partner's programmes to better suit remote learning in response to Covid-19?

Our programmes are constantly evolving to stay relevant and practical, and we're always innovating to enhance and improve our programmes – so we were well prepared for the shift to remote learning. In many ways, the Covid-19 pandemic and global economic downturn accelerated industry trends that had been underway for years. Colleges and universities have been innovating with online learning and exploring partnerships to expand capacity. The pandemic made this shift more urgent. Many schools were already facing financial challenges that were magnified by the crisis. And the digital skills gap only got bigger as a result of the pandemic and the rapid shift to remote work. The pandemic also accelerated changes at HackerU. The business has been expanding for years, but our growth in the past year has been exponential. We've seen a dramatic increase in enrolment as students respond to historic unemployment and economic uncertainty. We're extremely proud that our programmes have helped people find new careers during these difficult times. We've also added new academic partners and launched new programmes as schools see the value of our partnership. HackerU's programmes are turnkey solutions that require no investment from the university partner, which has helped them adapt quickly in the ever-changing remote world.

How does HackerU's work align with the missions and values of your university partners? What is done to help universities further accomplish their goals?

We see ourselves as an extension of the colleges and universities we're honoured to call partners – and we endeavour to advance their cause through our programmes. Our mission is to create generational impact by transforming lives. We do this by educating global learners for the digital careers of tomorrow, which is strongly aligned with our partner schools' values. We're also making significant progress towards realising our vision. The global digital skills shortage is one of the biggest problems and challenges the economy is facing today, and will continue to face for the next five years. We're here to collaborate with universities, and together create greater impact and be part of the solution.

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About Emerge

Emerge Education is a European edtech seed fund investing in world-class 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 the founders of globally renowned Edtech companies. Together, we are building the future of learning.

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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