University Alliance

Technical and professional excellence:
Perspectives on learning and teaching

Foreword

John Latham
Chair, University Alliance and
Vice-Chancellor, Coventry University

The diversity of Britain's higher education system is its greatest strength, with institutions not only offering students a wide choice of high-quality courses but also a range of learning environments and approaches. For some students, the large civic university is the most exciting and suitable option. Others may prefer a small or specialist institution. While some students thrive under traditional modes of teaching, others learn best by doing – for example by solving real-world problems in small project teams or practising their professional skills on state-of-the-art equipment, in the real world or in realistic simulated environments.

The Government recognised this when it introduced Degree Apprenticeships and I am delighted that Alliance universities now have over 120 higher and degree programmes accepting apprentices and a further 80 in development.

Alliance universities have always valued and championed innovative and excellent teaching, long before the introduction of the Government's Teaching Excellence Framework. We recognise that excellent teaching comes in many guises and that students are best served if universities are encouraged and incentivised to develop new approaches.

The importance of modern civic universities cannot be overstated in the context of Brexit and the Industrial Strategy. We already play a key role in our cities and regions and will work alongside newly empowered city-regions. Professional and technical education and applied research are key to improving productivity in all parts of the country.

So what does excellence look like in professional and technical education? Clearly it must draw on the expertise of employers to give graduates industry-relevant skills. Equally, it must be informed by cutting-edge research so that graduates are able to hit the ground running and challenge their employers to adopt new processes and practices. Excellent professional and technical education also develops global graduates, exposing them to ideas and cultures from around the world and offering them international experiences. Finally, it must support students to succeed from their first interaction to graduation and beyond.

Introduction

Maddalaine Ansell,
Chief Executive, University Alliance

At University Alliance, we have always recognised that our graduates are the professional workforce of the future and sought to offer students from all parts of society the opportunity to achieve more than they ever expected. When the Government announced its new focus on teaching excellence, our first thought was that this was a competition we could win. Our second was that we needed to make sure the Government understood and recognised our distinctive brand of teaching excellence.

This collection begins with an essay from Sir Michael Barber promising that the Office for Students will not be prescriptive or mechanistic about teaching excellence but will create a landscape in which many different kinds of teaching can flourish – like a wild garden supporting abundant life. Most Alliance universities trace their roots back to the Industrial Revolution and remain business-facing today. Neil Carberry from the CBI argues that close partnerships between business and the higher education sector should be at the centre of a modern industrial strategy. He calls on business to play a more active role in the design and delivery of the curriculum and highlights the importance of the practice-led research and development that Alliance members do so well.

Sir Ciarán Devane reminds us that businesses prefer graduates with international experience, global awareness and cultural competence and makes an impassioned case for international education. This will only become more important as Britain seeks an increasing number of trade agreements with global markets and to extend business networks. Hannah Sketchley and Sarah Kerton of the NUS point out that the current focus on teaching excellence provides an opportunity to interrogate what excellent teaching looks like and the values behind it. They argue that the ability to bring students in to co-create education is an important skill and should be valued as an integral part of good teaching.

We then move into a discussion of the approach taken by Alliance Universities. Ian Dunn of Coventry University explains that although the 'learning by doing' approach can be challenging to deliver, it is worth the effort as the graduate who has studied through problem-

based learning develops the skills to overcome challenges throughout their life. Eunice Simmons emphasises the importance of addressing the fact that students from some particular groups experience less good outcomes in terms of progression, attainment and outcomes than others and explains how Nottingham Trent University is using data analytics to identify gaps and develop interventions to support 'Success for All'.

Tim Thornton explains how the University of Huddersfield uses its long-standing links with local and national employers to develop industry-relevant courses. All courses are designed in collaboration with employers who sit on validation panels which give approval for new and substantially revised courses. Where professional accreditation is available, courses obtain this. Alongside this, students extend their learning in real-world situations; every single course has an embedded work-related component such as a placement.

Increasingly, graduates are going on to be self-employed or to create portfolio careers. Jane Turner from Teesside University discusses how enterprise education can develop an enhanced capacity to generate ideas and the skills to make them happen. She argues that an immersive enterprise learning experience helps to grow self-confidence, resilience and social confidence – particularly important for students who are the first in their family to enter higher education. Mike Clark and Stan Stanier from the University of Brighton discuss how investment in the UK's higher education estate has created spaces that inspire – by delivering student-led learning experiences rather than teacher-led instruction.

The final essay is from Mark Leach who challenges the received wisdom that our education can be divided into two categories: highly theoretical academic learning and vocational and professional education. He argues that this is a false dichotomy clung onto by those who like hierarchies when the real question for any potential student should be: "Is this particular educational option the right one for me, right now?" An excellent question indeed.

In the Afterword, Sam Grogan explains how University Alliance is going to further develop its distinctive brand of teaching excellence – curricula co-created with students and employers, progressive and innovative pedagogies using real world environments and support for students to succeed at every stage of their student journey.

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Contributors

Sir Michael Barber
Chair, Office for Students
Sir Michael is a leading authority on education systems and education reform. He was recently appointed as Chair of the Office for Students – the new regulator for higher education in England.

Neil Carberry
Managing Director of People and Infrastructure, CBI
Neil leads the work of the UK's leading business organisation on employment law and relations, the labour market, education and skills, energy, climate and infrastructure.

Sir Ciarán Devane
Chief Executive, British Council
Sir Ciarán took up the role of Chief Executive in 2015. Ciarán has focused on ensuring that all stakeholders understand and value the contribution that soft power, cultural relations and the British Council makes to security, prosperity and influence, and that the organisation and staff are aligned behind that vision.

Hannah Sketchley
Policy Officer, NUS
Hannah focusses on higher education, and her interests include education funding, student data and democratic education systems. She graduated from UCL in 2014 with a degree in German & History.

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Responsible for supporting NUS' HE campaigning, Sarah is also an educator on the International Team of the Kurt Loewenstein House in Berlin and a trustee of Sunderland Students' Union.

Ian Dunn
Deputy Vice-Chancellor, Coventry University
Ian leads the education agenda at Coventry University. The university is committed to diverse admission, developing successful students who then progress into meaningful roles in society.

Professor Eunice Simmons
Deputy Vice-Chancellor, Nottingham Trent University
Eunice has institutional oversight for quality assurance and curriculum development, enhancement and innovation at NTU. She is a Principal Fellow of the Higher Education Academy, Fellow of the Royal Society of Biology and of the RSA.

Professor Tim Thornton
Deputy Vice-Chancellor, University of Huddersfield
Tim, a historian, has served in various roles at Huddersfield, heading initiatives which delivered, for example, 100% professional recognition for HE teaching among colleagues and the leading position over the past decade in the National Teaching Fellowships competition.

Professor Jane Turner OBE
Pro Vice-Chancellor, Teesside University
Jane leads Teesside's Enterprise and Business Engagement Strategy. She previously worked at Northumbria University for 11 years where she held the position of Associate Dean (Business and Engagement) in the Faculty of Business and Law.

Mike Clark
Director of Estates and Facilities Management, University of Brighton
Mike is an experienced construction professional with a keen interest in ensuring that the university estate provides an inspiring and safe environment for all those that use it. He is also the Chair of the Association of University Directors of Estates (AUDE).

Stan Stanier
Assistant Director of Information Services, University of Brighton
Stan has over 25 years experience of designing and implementing technologies that support learning and teaching. Latterly, he has led Brighton's Modern Spaces Programme which has the remit to modernise all teaching spaces across the university.

Mark Leach
Editor, Wonkhe
Mark founded Wonkhe in 2011 to open and improve the debate about UK higher education. As editor, he oversees all Wonkhe output from the daily email briefings to blogs and leads a growing team in London. Before Wonkhe, Mark worked for NUS, HEFCE, University Alliance and GuildHE and was chief policy adviser to the former Shadow Minister for Universities & Science.

Dr Sam Grogan
Pro Vice-Chancellor Student Experience, University of Salford
Sam's role combines executive responsibility for assurance of the quality and standards of the institutional academic portfolio and its strategic direction and characteristics, alongside leadership and enhancement of the wider student experience towards a holistic sustainable student success which prepares students for life.

Innovation in teaching: tidy is good, so is untidy
Sir Michael Barber, Office for Students

Have you noticed, over the last 20 years or so, how landscape gardeners are much more willing than they were to let some quarters of London's parks grow wild? I used to have an office overlooking St James's Park and loved it in every season. Now, more than a decade later, much of what was then so orderly is left disorderly; formerly closely-mown grass now grows wild. The same fashion is visible across the country, as I saw recently in Roath Park in Cardiff, for example.

In parks, the balance in the last generation has shifted from tidy to untidy, though not completely. Indeed, the task is never done because the land is rich and stuff just grows: to achieve the balance requires constant attention, and decisions about what to do, even if the decision is to do nothing.

Similarly, in the higher education landscape, the Office for Students (OfS) will make it easier for new and different types of high quality providers to enter the sector, encouraging competition to the benefit of students. New providers will have to meet a high bar and demonstrate that they are delivering good outcomes for students, and the OfS will be clear about what's required of them, but they will be actively encouraged to enter because diversity is a strength. New providers, bringing different and innovative approaches and providing students with greater choice, will drive competition and encourage innovation in teaching throughout the whole sector.

At a broader level, institutional autonomy affords every higher education institution the opportunity to innovate in the interests of students. Some cling faithfully (and not necessarily wrongly) to tradition; successfully defying fashion, while demonstrably delivering great teaching and learning for students, has value. But there is no reason why innovation should only come from new or alternative providers and every reason why it shouldn't. Existing institutions already have thriving student communities to involve in their attempts at innovation – an immediately available group of partners and collaborators in design and experimentation.

In *An Avalanche is Coming* my colleagues and I drew attention to a wide range of innovations in all aspects of university provision. It was a provocation not a manifesto but its message was plain. Innovation is coming, often from outside universities altogether, and existing institutions should lead it, shape it and channel it rather than fear it.

The recent Teaching Excellence Framework (TEF) submissions provided some excellent examples of innovation coming from within existing providers, and I have been fortunate enough to see innovative practice myself when I have been to visit students and providers across the country. On a recent trip to Nottingham Trent University, for example, I learned about their experimental teaching rooms that use reconfigured teaching layouts and integrated technology to foster discussion and peer learning, and was shown their excellent student engagement dashboard which updates daily, student-by-student. Here, technology and analytics are being used to tailor student support and inform decision-making in real time. These are just a couple of examples of one provider innovating in pursuit of better outcomes for students – there are many more.

In meeting with leaders of institutions and with students I have heard broad support for the TEF. It will do for teaching what the Research Assessment Exercise and Research Excellence Framework have done for research, promoting an increased focus on and a higher profile for excellent teaching in higher education. In drilling down to the subject level, as the recently launched pilots will do, we will learn in ever greater detail about the sector's diverse approaches to teaching and the outcomes they lead to. Students will be able to make more informed choices about their course of study, encouraging competition around student outcomes, and institutions will be able to learn from each other, driving continued development and innovation.

In promoting innovation, the OfS will not seek to be prescriptive or mechanistic about what it wants to see. No amount of rule-writing by a regulator could create the diversity and richness that should emerge in a vibrant sector left to its own devices. Who knows what courses, models or technologies providers, individual academics, or students themselves might dream up?

The OfS will also work closely with UK Research and Innovation (UKRI). Time and time again I am told about the importance of the link between excellent teaching and excellent research. The blurring of the boundary between the two might well be the source of some of the sector's greatest innovation. Again, when visiting providers, I see evidence of teaching and research being proactively combined in the interests of students. At Brunel University, for example, buildings have been designed to facilitate and encourage interaction between faculty

and students, and their state-of-the-art metallurgy lab brings together business, research and teaching to the benefit of students, academics, and industry.

The corollary of encouraging risk-taking and innovation is that the OfS has to be prepared for experiments to fail. In such circumstances, it will not be a soft touch but nor will it bang the table and start looking for scapegoats. It will want to see rigorous learning from failed innovation; and it will always be open to an honest exploration of what is working and what isn't.

❝ On a recent trip to Nottingham Trent University... I was shown their excellent student engagement dashboard which updates daily, student-by-student. Here, technology and analytics are being used to tailor student support and inform decision-making in real time. ❞

In many ways, as we've seen repeatedly in other sectors, it is much more convenient to allow the regulator to pile on regulatory requirements. This then provides endless opportunities to moan (and secretly enjoy moaning) about bureaucracy; it also means the regulator can be blamed when things go wrong. This is the road to mediocrity at best.

If the regulatory regime we establish is successful, then the competitive climate will intensify and there will be more innovation at all possible levels in the system. Traditional approaches will need to demonstrate their value rather than roll forward, unquestioned, year after year.

Much like the parks that have, in recent times, made space for a more diverse flourishing of biodiversity, the OfS will seek to unlock the potential that resides within the sector; it will unleash greatness.

The employer perspective
Neil Carberry, CBI

Given the UK's future prosperity relies on the skills and ingenuity of our people, no industry has a bigger part to play in supporting economic and social growth than our world-leading higher education sector. Yet the environment in which universities operate is changing rapidly. The world of work is undergoing big shifts and, whilst it is hard to predict how access to skilled migrants might change as the UK leaves the European Union, we know that additional routes to higher skills will matter more, and prepare people for the changes they will face – whatever the outcome of Brexit negotiations.

Partnerships between universities and businesses are essential to getting this right. They can help deliver the skills our economy will need for the future and, along with a wider range of forms of provision, can help promote growth, expand opportunities and boost competitiveness.

The world in which we live is increasingly complex and fast-paced, whether because of technological developments – from AI to blockchain – or the advent of innovative new products and services. Students will need to become accustomed to a world where changes of job will more often mean changes of career, as industries develop and evolve. To prepare for this, graduates will need to constantly develop their skills and experience, to enable them to fill roles that do not currently exist. What they learn at university will need to underpin their ability to navigate this process.

The mix of our technical skills base also matters. We know that the UK already suffers from acute skills shortages in key areas, such as STEM – although as our vibrant creative industries show us, we mustn't devalue the important role arts subjects will continue to have.

The development of a modern industrial strategy presents a fantastic platform to address these challenges. Universities, as deep-rooted institutions in the UK's regions and nations, have to play an important role in spreading opportunities throughout the country as part of this.

So then, how then can we make this a reality? We should start by looking at how to foster greater collaboration between universities and businesses on curriculum design and delivery.

To start with, we need to recognise that there is great work already

going on. Universities are increasingly working with employers to boost the skills of the current and future workforce. The incentive for employers is clear: for businesses, graduates are as attractive as ever. Three-quarters of businesses anticipate having more job openings for people with higher-level skills over the coming years, and eight out of 10 have maintained or boosted graduate recruitment this year. And for students increasingly interested in securing value for money, an education which is not just intellectually challenging but also relevant to what they do next is highly compelling. So for employers and graduates alike, the business case is clear.

Nonetheless, more needs to be done to meet the economy's future higher skills needs. Over half of businesses are not confident that there will be enough people available in the future with the necessary skills to fill their high-skilled jobs. Businesses can do more to help the higher education sector deliver the skills our economy needs for the future. To equip the future workforce with the appropriate skills, knowledge and expertise, businesses need to play a more active role in the design and delivery of the curriculum.

Existing partnerships show how successful these collaborations can be. Whether that's Coventry University working with Unipart Group to develop an Institute for Advanced Manufacturing and Engineering and 'faculty on the factory floor' (See the case study about AME later in this publication) or the University of Greenwich's partnership with Ford, University Alliance members enjoy fantastic relationships with more than 16,000 firms.

Despite this, too often we hear of examples of long-term partnerships between universities and businesses growing out of chance encounters or through individual effort. Many businesses – especially the medium-sized firms that are the real engines of our economy – tell us that they 'don't know where the front door is' to a university. On the university side, there is a mirror image – a struggle to reach these firms, while larger businesses know how to navigate the system and the smallest firms often grew out of the university ecosystem.

Getting these partnerships with growing firms right offers two fantastic opportunities for businesses – closer links with universities on talent development and access to the kind of practice-led research and development that many University Alliance members do so well. It

is a critical challenge for the UK that our leading-edge research is excellent, but we struggle with development and diffusion. Better work with universities by firms of all sizes can help to change this.

To meet the UK's future skills needs, we know we'll also need much more dynamism and innovation within the higher education offer. For the UK to thrive, we must develop a wider range of pathways to higher skills, including traditional courses delivered through sandwich or accelerated degrees, and in-work options like part-time, distance learning, and apprenticeships.

> ❝ To equip the future workforce with the appropriate skills, knowledge and expertise, businesses need to play a more active role in the design and delivery of the curriculum. ❞

Through university and business collaboration, cutting-edge courses have been developed that are fit for a changing world. For example, UWE Bristol hosts the largest robotics lab in the UK which provides space for students to work with industry experts to gain first-hand experience and training.

To succeed, we need to build on these fantastic types of initiatives. Degree Apprenticeships provide an exciting new route into higher education and could prove attractive to those who would not traditionally undertake degree-level study.

In helping to blur the boundaries between university and business, Degree Apprenticeships can help strengthen existing relationships and foster new collaborations between industry and academia. Liverpool John Moores University, for instance, has helped in the development and delivery of 13 Quantity Surveying Degree Apprentices in partnership with eight different companies, including three SMEs.

The responsibility of making Degree Apprenticeships a success is

shared by universities and businesses. Although the introduction of the Apprenticeship Levy has helped to accelerate their adoption by making a dedicated source of funding available for the first time, provision remains limited. To guarantee a successful expansion of Degree Apprenticeships from this low base, employers will need to work with universities at the early stages of development to ensure provision meets need.

Part-time study will also be an important way to ensure that everybody who can benefit from higher education is able to do so. Two-thirds of the workforce of 2030 have already left full-time education, meaning that learn-while-you-earn models of education will be vital in helping people to upskill. The CBI has been working with UA and others to reverse the effects of the 2011 reforms on part-time numbers.

Yet the rigidity of the Apprenticeship Levy means that many part-time degree courses are off the table for employers looking to support their workforce to develop higher skills. This is one reason why the Levy should develop into a more flexible skills levy.

So, whilst there are many challenges, there is also a fantastic opportunity facing the higher education sector – and much of this relies on enhanced collaboration.

Business is clear that through closer partnerships with the higher education sector, we can put our world-class universities at the centre of a modern industrial strategy, and the work we put in now will ensure that we have the skills necessary for the UK's future prosperity.

Global graduates
Sir Ciarán Devane, British Council

A global outlook is a vital skill for future graduates. Our next generation of leaders will need to understand international cultures and engage with governments constructively both when there is a consensus and when there is a difference of views – and work with international partners to tackle those who have extreme views that infringe on basic human freedoms.

More widely, businesses prefer graduates with international experience, global awareness and cultural competence, not to mention the ability to speak more than one language. In 2013 the Association of Graduate Recruiters reported that 79% of employers believe that 'knowledge of the wider world is more important than classification of degree'. More recently in December 2016, the QS Global Employer Survey Report found that six out of 10 employers around the world give extra credit for an international student experience, and more than 80% said they actively sought graduates who had studied abroad.

It is not clear, however, that current UK graduates are properly prepared for the global workplace. According to recently published British Council research, 74% of chief executives believe that we are in danger of being left behind by emerging economies unless young people learn to think globally.

The Australian government has recently published its own higher education internationalisation strategy.[1] It is a bold, sensible, and challenging statement which makes a series of clear targets for its international profile, including in higher education. Importantly, it demonstrates that Australia is serious about internationalisation.

As a country, we are seeking an increasing number of trade agreements with global markets and to extend business networks. To adjust to this, large, small and medium sized businesses will all need increasingly international competences and knowledge. Fortunately, there are numerous examples of good practice in UK universities. Coventry University has a Centre of Global Engagement, Liverpool John Moores University provides a Global Fund to support international projects, Nottingham Trent University has 'Global Lounges' that offer virtual spaces for international debate and

1 https://internationaleducation.gov.au/International-network/Australia/InternationalStrategy/Pages/National-Strategy.aspx

" Employers value attitudes such as openness, curiosity, innovation, resilience and adaptability. These are all attributes that are key to coping in a different country, especially when engaging in another language. "

the University of Salford provides a Global Graduate Scheme that connects students with firms offering international internships and experience.

However, this is only a small part of a much bigger picture. Internationalisation is not only about employability and business knowledge. It contributes to the stability and global influence of the UK.

The UK is in danger of looking at our interactions abroad as bringing only economic benefits. The Longitudinal Education Outcomes report focuses exclusively on graduates earning potential.[2] We should be looking at 'value-for-money' in more ways than just financial return. Outside of the UK many countries already recognise the importance of an internationally informed curriculum and internationally applied knowledge and skill base for its next generation of leaders and influencers. They highlight how a global cultural awareness shapes the way in which people engage with the world at large.

The Pontificia Universidad Católica in Santiago, Chile provides a fully inclusive international experience for all students. Its signage is multilingual, its social events are a stage for international artistic excellence, its library resources full of volumes in multiple languages. A tri-lingual exposure and experience for both students and staff is normal, and all staff continually engage outside country borders. Católica is hardly unique in its commitment to internationalisation. Mexico's University of Monterey (UDEM) has an international internship target for all students. It is almost there with over 90% of its current cohort having a work related international accredited study programme delivered outside the country's borders. It will probably reach its target next year – and it's not a small university, it has around 10,000 students.

Our UK university mission statements make bold visionary positions around the importance of a global perspective. Yet our measures of impact and success tend to be concentrated on the numbers

2 Longitudinal Education Outcomes 2016/17- https://www.gov.uk/government/statistics/graduate-outcomes-for-all-subjects-by-university

of international students studying in the UK, and on their financial rather than cultural impact. This was reinforced when in August, the British Government announced a new review into the importance of international students to the UK – focusing on the economic benefits to communities and local institutions.

The success of a higher education sector's internationalisation activities should cover both benefits to the graduates as they study and the benefits to the communities those students engage with. For students themselves an international learning experience is a clear and simple way of gaining familiarity with the alternative cultures and values of another country. However, UK students are famously reluctant to leave the UK. There are serious questions around why the UK outward mobility is at such a low level compared with other countries. There is a tendency to assume the cause of this is the lack of language competence, or the failure of universities to offer international experiences.

Whilst only speaking one language undoubtedly presents problems in reducing confidence in students to study overseas, a number of other factors apply. Many UK students are the family breadwinner, or needed to provide practical support. They may face problems with accommodation or with rental arrangements which frequently require long-term commitments, preventing shorter term overseas engagement. Almost 80% of students are also funding their university fees, at least in part through part-time work near their UK university location.[3]

Clearly we need a bold and imaginative mechanism for student mobility if we are to improve global skill development. It should meet the targeted needs of the UK, ranging from vocational skills to research, and managed through pre- and post-mobility into clear benefits for the countries participating.

Future mobility must allow for considerably more flexibility than the current semester or year-based schemes, recognising part-time study, work-based learning and short term training placements. We may then meet the two challenges of supporting multi-way mobility and meeting skills and innovation gaps. The ability to transfer academic knowledge to the world of work, leadership and innovation

3 Endsleigh 2015 Student Survey, https://www.endsleigh.co.uk/press-releases/10-august-2015/

is what counts. Countries are now reconsidering the importance of apprenticeships, applied understanding and business relevance.

So what will make a truly global graduate, capable of international agility, global thinking and borderless innovation?

The Association of Global Recruiters listed the top four globally valued skills as the ability to work collaboratively, communication skills (speaking and listening), drive and resilience, and embracing multiple perspectives. Alongside such skills, employers value attitudes such as openness, curiosity, innovation, resilience and adaptability. These are all attributes that are key to coping in a different country, especially when engaging in another language. Developing such skills within a UK location may be satisfactory up to a point, but there is nothing like direct global experience for developing these skills.

The UK certainly does generate highly employable graduates. Across the UK higher education sector there are strong and focused examples of internationalisation that support the generation of the new elite of global graduates. However, the challenges faced by rapid development and availability of internationally dextrous graduates from overseas universities, added to some negative perceptions of the UK, leaves little room for complacency.

More than ever each country needs its new generations to take a full part in international activities, ranging from collaboration and engagement, to policy influence. Culturally informed leadership is not only important for an individually country; it binds nations together in an understanding which leads to greater global stability, despite our differences.

Blurring the boundaries: co-creation in technical education and across the sector
Hannah Sketchley and Sarah Kerton, NUS

Co-creation of education fosters a more democratic education system. It sits within a wider set of values about the role that education plays in society. Co-creation provides opportunities for students to develop their education on an equitable footing with academics and teachers; rather than merely to receive knowledge passively.

To embed co-creation and meaningful student engagement at a course, institutional and whole sector level is to begin to flatten the structures which disseminate knowledge – and in turn break down the gatekeeping of knowledge. This begins a process of redistributing power throughout the academy and fostering more innovative teaching approaches. By redistributing this power, we begin to break down the barriers to accessing education and to value learning as a community practice to which everyone can make a valid contribution.

This is increasingly being recognised by universities to different degrees. In many institutions, it is common for students to present their reading, or an aspect of their own research or practice as part of a class, or to set the direction of discussion. This values the knowledge being produced by the student and fosters the sharing of technical skills such as presentation and argument, and of applying knowledge and responding to a room. The two case studies below from UWE Bristol and Sheffield Hallam University provide examples of co-creation within universities with a professional and technical focus.

The ability to bring students into co-creation is a skill in itself, and should be valued as an integral part of good teaching. Innovative teaching practice should be promoted and shared, and students must be a part of valuing this. On a concrete level, academics and staff at all levels should be given the time to develop their practice as educators as well as their careers as researchers and developers – and given the funding to do so.

An effective teacher should be able to respond to a room and take discussion in new directions in response to a students' chains of thoughts. This requires a willingness to learn and to be challenged. This environment of challenge can be fostered by leaving behind the idea that contribution is weighted heavily and that co-creation is coded in the values of assessment, as it currently is when students are only asked to present in return for a portion of their mark.

The current political focus on teaching excellence provides an opportunity to interrogate what excellent teaching actually looks like, and the values behind it. There is an opportunity to break away from the traditional format of lecturer-student across all sectors, but this must be underpinned by support for teaching staff. Any initiative which expects to foster excellent teaching through metrics and a focus only on competition will be at best superficial and at worst very damaging to innovative teaching in the education system. Such focus must also not favour non-innovative teaching in the name of upholding the position of elite institutions on the merit of their reputation rather than their practice.

This is a challenge for the education sector. Embed co-creation in your learning environments and allow yourselves to be challenged by it and by the results. The process of redistributing power throughout an institution will by necessity be an uncomfortable process, however the rewards will be reaped for society as a whole.

Team Entrepreneurship at UWE Bristol (Full case study on next page)

Toby Bartholomew, who established innovation consultancy services company Creative Monkey Solutions while on the course, said: "I can genuinely say that I am proud to have been on this course. I am proud of the person I have become and I am proud of the team that is around me. I would not change the process I have been through."
Image: @ tom_sparey/UWE Bristol

CASE STUDY: TEAM ENTREPRENEURSHIP AT UWE BRISTOL

Bristol Business School's Team Entrepreneurship programme is one of the first business degrees to embrace the innovative 'Tiimiakatemia' model in the UK. Pioneered in Finland, the model avoids traditional classroom formats.

Instead, students launch their own business ventures. They work in a dedicated office environment within 'team companies' supported by a 'team coach'. Learning is built around three clear strands which combine to develop knowledge, skills and mindset:

- **Individual strand**: students use self-managed learning principles to complete their own programme of development and learning, completing a personal learning contract they agree with their team companies (rationale: entrepreneurs need to manage their own learning).

- **Team strand**: students develop leadership, followership and collaborative skills within team-based projects and ventures (rationale: entrepreneurs need to work with others). Each team company has its own open plan office space in the dedicated Team Entrepreneurship Hub.

- **Venture strand**: students launch and run their own businesses and social enterprises (rationale: entrepreneurs need to create organisations that generate value).

Assessment focusses on enabling students to evidence learning from their engagement in practice (learning by doing). Assignments include the requirement for active engagement with external businesses and project teams address real business problems.

Each week students engage in 'creative conversations' with external employers and entrepreneurs, including amongst the alumni network. In some cases this has led to longer-term mentoring for the students. Businesses being run by graduates of the programme include Crowdreach, an agency which helps entrepreneurs raise capital through crowdfunding and Unique Insights, which offers universities sophisticated analytical software to help them reduce undergraduate drop-out rates.

The first cohort of students graduated in July 2016. DLHE and NSS data shows high levels of attainment and satisfaction, with 100% of graduates saying that the programme prepared them well for starting their own business. Graduates not running their own companies are also proving to be highly employable within professional and managerial roles. The programme is developed by the active involvement of its students including through the requirements of the final year project which requires their input to the future of the programme.

CASE STUDY: CRIMINOLOGY
AT SHEFFIELD HALLAM UNIVERSITY

When the Criminology team at Sheffield Hallam University built a first year curriculum which aimed to raise student aspirations, to welcome them as members of a large and diverse learning community and foster a sense of identity and belonging, their holistic approach included a strong co-creation element.

In order to increase confidence in the student population and develop graduate capabilities they used challenges posed by public, charity and social enterprise organisations. For example, South Yorkshire Police provided a remit to develop and deliver teaching materials to a range of local school children, based on the causes and solutions to specified crimes such as cyber-bullying and hate crime. These challenges enabled students to place contemporary topics in context working alongside sector experts, service providers and local school children to develop creative solutions to real-life problems. As always with live, real-world challenges, the answers do not yet exist. They can only be co-created as the activities progress.

These authentic learning experiences enabled a shift in focus of skills development to move from 'thinking about doing' to 'doing' thus providing a bridge between school/college and university, and providing a framework around which other learning and support activities could be wrapped. To achieve this, the teams involved moved beyond the boundaries of accepted practice by viewing the first year experience through the eyes of students rather through the roles of individuals and teams.

Since its introduction in 2015/16 overall attainment has improved significantly across all first year modules.

Learning by doing
Ian Dunn, Coventry University

The education strategy at Coventry University has long been based on an enquiry-led approach to learning. The premise is that, whilst we all learn differently, most people learn best by being exposed to both theory and practice. Developing learning space, physical and intellectual, for practice can challenge the institution's estate, the academic who moves from being teacher to facilitator and the student who may need more time to practise activity. None of these are acceptable reasons not to try if, at the end of such a process, the learner is capable of much more.

Enquiry-led learning is a broad term that encompasses many practices including, most notably, a problem-based approach to learning. Much has been written over the years about the values and virtues of a problem-based curriculum. The medical curriculum at McMaster in the 1960s, the establishment of the University of Aalborg and indeed work done at Coventry from the 1980s to date in Engineering and Health, are all examples that are discussed in the literature. Work published by Coventry along with the Royal Academy of Engineering and the Gordon-MIT Engineering Leadership Program into studies about the effectiveness of such approaches indicated both enhanced student retention and student achievement, when compared to a more traditional curriculum.

The difficulties with such an approach are equally well documented. First, the physical space in which much higher education takes place is configured for many competing activities, teaching large and small groups, engagement with enterprise and with research. All are equally important and compromise is inevitable. With good design and proper understanding of the competing needs these compromises can be negotiated and there are excellent examples of such spaces.

The second is that a curriculum model that is not especially adapted towards traditional examinations is often in conflict with some of the more traditional elements of external examining and professional body accreditation. Both need to be challenged. Good assessment design can result in outstanding learning.

Third, and often most significantly, are the competing demands on time for academic staff. It is almost impossible to sit in a hybrid enquiry-led and traditional teaching operation as they demand very different mindsets. This means that the implementation of such an

approach needs to be system-wide and supported by excellent staff development. Once the skills are developed the academic can feel truly liberated from the grind of preparing traditional lectures and seminars and is free to bring complex examples from their research and business activities.

By bringing many sources of information together for, and with, the student and helping them to develop the skills to filter these sources and use them to solve problems, the student learns skills in high demand by employers. In the very best cases a wide range of skills that the employer demands of a modern graduate can be properly embedded into the subject learning including team and group working, problem-solving and creativity, resolving complexity and communication skills. This does not, of course, mean that the traditional lecture and seminar are not used in such an approach but the lecture often becomes a showpiece around which learning is structured, rather than an attempt to deliver content.

The fourth complexity in implementing such an approach is the need to flex administrative and support systems created to support a more traditional learning style. Access to estate and systems needs to be much more flexible. The recording of academic achievement needs to be designed around the learning and not around neat parcels of time. The provision of student support mechanisms needs to be front loaded, when the stresses and anxieties are greatest, rather than back loaded in a traditionally examined approach. There are of course many more examples.

It is worth exploring how to overcome these challenges because the student emerging from the enquiry-led approach to learning is more robust, better equipped for professional life and normally a better problem solver. Many Alliance universities are pursuing the 'learning by doing' approach because it enables them to educate outstanding individuals and to equip them with the skills needed for the world of work.

CASE STUDY: AME
AT COVENTRY UNIVERSITY

The West Midlands manufacturing and engineering sector suffers skills shortages with major employers attempting to recruit from a limited pool. To overcome this, the Coventry and Warwickshire Local Enterprise Partnership (LEP) set a target of 5,000 new engineers by 2015.

To engage with this agenda, Coventry University and Unipart agreed to build a partnership that incorporated joint research and development activity, supported by a proposed new facility at Unipart. The **Institute for Advanced Manufacturing and Engineering (AME)** is in part funded through the HEFCE Catalyst Fund. It is a very tight collaboration between industry and education on the company premises. Students, researchers and Unipart employees work together to solve difficult problems, equipping the students with great resilience and making them highly employable in the industry skill shortage field of manufacturing engineering.

Designed as a bespoke 'Faculty on the Factory Floor', it is underpinned by a shared focus on teaching and skills, high-quality research and the core business of developing and applying energy and powertrain related technologies for the automotive, aerospace, oil and gas, rail and renewables industry sectors. Coventry University's 'activity-led learning' model underpins teaching, prioritising practical, work-based learning for students. Industrial advisory boards are active in curriculum design to ensure that programmes remain relevant. The new building and manufacturing equipment has been designed to provide learning spaces and resources.

AME recruited its first cohort of more than 30 students in September 2014. Selected students receive scholarships of £3,000 and access to summer placements from Unipart. Students can also access career development opportunities after graduation including management training, internships, international placement, and employment opportunities across the Unipart Group and with other leading manufacturers. AME also offers fully funded PhD studentships.In addition, AME supports Coventry's employment-focused initiatives such as the Add+Vantage scheme (the university's compulsory employability module based around the workplace) and the Faculty of Engineering and Computing's 'EC Futures' programmes which focus on employability and work experience for students.

The partnership plans to increase its recruitment of staff and students over the coming years. Coventry is considering whether this model of deep engagement can be adapted for other STEM disciplines. While fundamental principles are transferable, using this model elsewhere must recognise the specific needs of different partnerships and industries.

The Success for All programme: challenging the assumptions
Eunice Simmons, Nottingham Trent University

Differential in-course progression, attainment and outcomes for different student groups are apparent across much of UK higher education. At Nottingham Trent University (NTU), the first systematic attempts to address this focused on interrogating centrally-held data to identify the scale of the issue and then sharing relevant reports with academic Schools and quality committees. The limitations of this approach of 'narrowing the gap' were quickly apparent. Staff contested data at first and when it was clear that disparities were not artefactual, they wanted more research before they felt they could take any action. Course teams felt little connection with aggregated results. Schools did not want institutionally-imposed policies, but found it difficult to create local solutions.

What was achieved, however, was a much wider understanding that we have an above average proportion of undergraduates from disadvantaged backgrounds and these students predominantly come from beyond Nottingham. A quarter of our UK undergraduates are from homes with mean annual income of £15k or less and a similar percentage come from homes with above average incomes. We also recruit a larger than sector average proportion of students from Black and Minority Ethnic (BME) groups. The black student intake in particular is well ahead of the percentage in the regional and UK population.

The following year a different approach was taken. Data were made available at a more granular level and more support was given to Schools in the interpretation of their figures, particularly where group sizes were small. Using these new reports, Deans were asked to lead discussions with their Schools and highlight the priority concern(s) for their subject areas. Schools were then challenged to develop action research projects which tested different interventions to address these priorities. Led by the Centre for Academic Development & Quality (CADQ), this approach framed the problem as one of collaborative enquiry and therefore familiar territory for staff: it gave them a way to take action. It yielded much richer discussion, not least about the constraints of researching with students, the scalability of some of the interventions and the role of staff beyond the teaching academics.

Having raised awareness and knowledge of Schools about the 'gaps' and tested some interventions, it was time to get the whole university

on board. NTU's top institutional priority is to ensure that we create opportunities for all of our students to succeed in developing the knowledge, skills, character and resilience to play the positive role in society that they choose for themselves.

A new programme was therefore launched under the heading 'Success for All' with Vice-Chancellor Professor Edward Peck as Chair of a Steering Group with School and professional services membership. This signaled to staff the seriousness with which NTU now regarded this issue and the recognition that student success is everyone's responsibility. Positioning Success for All as an institutional strategic priority promotes the progression and attainment of all our students whatever their background, characteristics or prior educational history.

❝ Harnessing the power of data analytics has been a game-changer for our staff and students. ❞

Success for All combines local initiatives and systemic university-wide interventions. It also emphasises the importance of individual agency. In Schools the Action Research projects were reviewed and the successful ones scaled up, new ideas came forward and there was strategic investment in the tutoring function. Deputy Deans shared practice across Schools, leading to further adoption of effective practice. At an institutional level the Trent Institute for Learning & Teaching (TILT) set up a BTEC Champions group to recognise the particular needs of students entering university with general vocational qualifications. TILT also launched a popular series of events open to the sector focusing on the Success for All agenda.

In common with other Alliance institutions there has been much investment in the NTU student experience but harnessing the power of data analytics has been a game-changer for our staff and students in understanding whether students take advantage of all that is available. Working in a creative partnership with a key supplier, NTU now has a student dashboard driven by data streams, including use

of library, Virtual Learning Environments and e-submissions, which enables an individual to compare their activity level with the course average. Students have worked with us on an attendance app which can also feed in to the algorithm but the focus is not on presenteeism but on 'engagement', particularly with academic resources. Focusing on the positive, rather than talking about 'at risk' students means tutors and students can discuss these same data in a supportive atmosphere.

Employability outcomes are key to really delivering on a life-changing education and NTU's Employability service is one of many which have developed their expertise in encouraging students to 'engage'. Research at NTU demonstrates unequivocally the value of a sandwich year in overcoming any disadvantage of prior background. This is borne out from qualitative interviews with NTU graduates in which they reflect on the capital derived from placements and the associated positive impact on academic work, sense of belonging and, ultimately, graduate prospects. Through Success for All, students in key groups are targeted with opportunities and supported in taking them up.

The Nottingham Trent Students' Union (NTSU) has been involved in the Success for All programme from the start. The next stage sees the launch of a Collaborative Engagement & Retention Team, jointly run with NTSU using student mentors to get alongside all students but particularly those with low engagement. Signposting to academic and wellbeing support services will be a vital part of the mentor's role. To this end, NTU has improved the integration of student support services with academic Schools and enhanced student mental wellbeing service provision, drawing on sector best practice (e.g. Student Minds) to support students with mental health difficulties. Academic Skills provision is now centred in the Libraries with a new 'Skills for Success' website and increased availability of maths and English support. There is early indication of success in reducing gaps in gender and BME attainment and analysis is underway to identify which initiatives have had most impact.

Significantly, it was decided to situate the new engagement team in the university's Schools, Colleges & Community Outreach department as this team has a deep knowledge of the context from which many of our target students come. The team is accustomed to longitudinal programmes as it currently engages with thousands of pupils from

age 8-18, often employing active learning pedagogies championed by TILT. Their skills will be invaluable in supporting the students through their university years.

Finally, it is essential to look at the 'what' of the educational offer rather than just the 'how'. Across the university, a wholesale 'Curriculum Refresh' is being undertaken to ensure courses develop the required skills and knowledge for student success. As part of this a team of 'Educational Developers' has been deployed by CADQ, one in each of the eight Schools, with the role of challenging course teams to look anew at their content, sources, prior assumptions and inherent bias. This is challenging stuff but it is proving very impactful – and when embedded across all our provision should increase our chances of achieving 'Success for All'.

The University of Salford has pioneered a new BSc Civil Engineering curriculum based around real-world design challenges co-created and assessed with employers and flexible online learning

Engaging employers
Tim Thornton, University of Huddersfield

Although many Alliance universities only became universities in and after 1992, most grew out of institutions with a longer history. For example, the University of Huddersfield became a university in 1992, but its roots lie in the formation of the Young Men's Mental Improvement Society in 1841, which, after merging with the Women's Educational Institution, soon became a Mechanics' Institute. The Institute sought to provide outstanding education to all who might benefit, regardless of origin, and these or similar goals remain core to the mission of all Alliance universities; but our vision has expanded, to incorporate education for the widest range of professions, to address the global demand for high-level skills, and to serve a student body that is truly international.

To achieve this vision, Alliance universities have developed a distinctive form of teaching that draws on our long-standing partnerships with industry.

This involves:

- Cutting-edge current curricula co-created with students, employers, community groups and service users;

- Progressive and innovative pedagogies which integrate employer-relevant challenges for learning and assessment, using real world environments and simulations to provide work-based learning opportunities;

- Supporting individual students to succeed and develop at every stage of their student journey, from their first interaction to graduation and beyond;

- Enabling our students to engage with our academics and directly with employers in effective and innovative ways.

At Huddersfield, all courses are designed in collaboration with employers, who sit on validation panels which give approval for new and substantially revised courses, and on subject review panels, to ensure that courses remain current and relevant to professional employment. In the Health area, service users and carers also participate in course development through the Public Partnership Group.

CASE STUDY: COMBINING COMMUNITY SERVICE WITH CLINICAL ASSESSMENT EXPERIENCE AT UNIVERSITY OF HUDDERSFIELD

Every year University of Huddersfield staff and students work in partnership with external clinicians and sector partners to provide an innovative undergraduate clinical skills event, and at the same time promote leg health to the local community.

Members of the public are invited, via local press advertisements, to attend a leg health assessment in the specialist Podiatry Clinic at the university.

The holistic assessment incorporates past medical history; assessment of limbs for chronic venous disease and arterial assessment.

The assessment is carried out by podiatry undergraduate students, supported by practising clinicians and university staff. The results of this assessment are communicated to the individual patient, along with any necessary early intervention for identified conditions. This can include lifestyle advice, referral to podiatric care, provision of hosiery, or instructions to visit their GP. Information gained from this assessment and details of intervention is also sent to the GP, following consent from the individual patients and carers.

This genuine interaction with patients enables the student podiatrist to develop assessment skills under supervision and understand appropriate referral pathways for those requiring medical input. The student gains appreciation of the need for, and clinical benefits, of early intervention for venous/lymphatic insufficiency. They also develop confidence in selecting hosiery, as well as building their measurement and fitting skills.

The clinic brings a range of benefits for individual patients and carers. The process of self-referral and subsequent assessment and treatment facilitates empowerment. Individuals feel listened to and supported. Meanwhile the assessments promote self-care, prevents disease progression and potentially the development of further complications, and allows timely specialist referral to be made in those cases requiring prompt review. The leg health assessment days facilitate undergraduate training, the public health agenda and general health promotion and have resulted in positive feedback from staff, patients, carers and students. All the people attending the clinic reported that they felt they had been listened to, adequately assessed and would recommend to others to attend the clinic.

Where professional accreditation is available, courses obtain this. At Huddersfield, we work with 43 Professional, Statutory and Regulatory Bodies and across the Alliance over 40% of courses are accredited by professional bodies. This means that our graduates leave with both a degree and a professional qualification. We invest in state-of-the-art equipment so that our graduates will be familiar with the latest equipment when they move into industry or professional practice.

We require students to extend their learning in real-world situations: at Huddersfield, every single course has an embedded substantial work-related component such as a placement. We believe this promotes exceptional engagement because students recognise the relevance and impact of their learning.

CASE STUDY: INNOVATIVE CREATIVE EXCHANGE AT UNIVERSITY OF HUDDERSFIELD

The Innovative Creative Exchange (ICE) at the University of Huddersfield provides a successful structure for embedding interdisciplinary industry collaborations into the undergraduate experience. ICE provides a dynamic and unique environment outside the traditional curriculum for undergraduate students from across seven schools to work on industry-led challenges which cross discipline boundaries.

It introduces disruptive parameters to impact on learning, placing students in a time-controlled environment, challenging students both creatively and technically in a competitive environment, thus developing essential employability skills such as problem-solving, resilience, communication team-working, and project management.

The four-year project was originally funded by the Royal Academy of Engineering visiting professor scheme. However, it has been so successful in networking students across the university that it has continued into a fifth year with a number of industry-led design challenges led by local and global companies. It critically empowers the learner through providing an engagement experience which focuses on knowledge co-creation, building sustainable communities of learning and commercial awareness. It enables students to realise strengths and development using real-world challenges led by the commercial sector.

For example, the music curriculum offers rigorous opportunities to work in professional circumstances such as in the organisation, technical support, and performance of the internationally renowned Huddersfield Contemporary Music Festival.

Partnership between students, academics and employers at Huddersfield ensures students develop as confident critical independent thinkers, able to work alongside the best in their field. For example, student conferences such as the Finding Voice conference, undertaken by third year Childhood Studies students, sees presenting the application of their own work-based learning and research to real-world contexts, in the company of leading figures in education such as Sir Al Aynsley-Green, the former Children's Commissioner for England.

Many Alliance universities have used their experience of work-based learning to create higher and degree apprenticeships. We recognise that flexible, work-based routes to skills are hugely important if we are to create the widest possible pool of talent and support social mobility. We see the Degree Apprenticeship agenda as a crucial element of the broader apprenticeship programme and recognise their potential to transform the way professional, technical and higher education is offered in the UK. In particular, they can offer an attractive route to degree level skills (and a highly valued degree award) for a wide range of learners, including those from widening participation backgrounds, older learners already in the workforce and people who would prefer to study part-time. Across University Alliance, we now offer over 120 Higher and Degree Apprenticeships with another 80 in active development.

Our distinctive pedagogy offers a real alternative to more traditional forms of learning within universities. It has come from our heritage as technical institutes, polytechnics and Colleges of Advanced Technology but we have developed our pedagogy so that it fits our students for the modern world where many more professions demand the knowledge, skills and attributes which graduates possess. It is therefore unsurprising that the vast majority of our students go on to work or further study – over 96% at Huddersfield and 94% across the Alliance as a whole.[4]

4 HESA's UK Performance Indicators 2015/16: Employment of leavers

CASE STUDY: LEARNING AS A RESEARCHER
AT UNIVERSITY OF PORTSMOUTH

The University of Portsmouth wanted to use a specific unit to develop transferable skills in students (teamwork, problem-solving and communication skills). However, this was not proving effective. For example, in the teamwork exercises students tended to work alone and pull their efforts together at the end rather than working as a team throughout.

Following work by Professor Sherria Hoskins on complex learning, the university introduced a 20-credit, optional, Level 5 Research Based Learning (RBL) module to sit alongside their study where students apply for research jobs advertised by staff. Roles included delivering and evaluating randomised controls in schools and exploring elderly adults' spatial visualisation in relation to their ability to use a prototype automated phone service. On average about 50 students a year now take this module and staff are incentivised via a small research bursary for every post they offer and fill. Assessment is through a learning portfolio in which students provide evidence that they have achieved learning outcomes.

Evaluation of the RBL module after its first year revealed that respectful and mutually beneficial relationships developed between staff and students, which contributed to continued research partnerships and transformational learning. Shared staff and student peer-reviewed journal articles have resulted from several projects, demonstrating this to be an authentic research exercise, one that has now been expanded into Level 6. The RBL unit has also been adopted as an elective by the whole university and broadened out to include more than just research experiences.

Chris Thomas, like many students, embraced this research opportunity. He said: "It was probably the best experience I could have received for my career...it's about creativity, persistence, and patience. These are traits which you cannot express in any other way except through working with your peers."

Enterprise education
Jane Turner, Teesside University

Enterprise education, defined by the Quality Assurance Agency for Higher Education as 'the process of equipping students (or graduates) with an enhanced capacity to generate ideas and the skills to make them happen',[5] has been in existence in the UK for the past 40 years, and is becoming increasingly embedded in university curricula. The main principle underpinning this process is the empowerment of individuals as active participants in an immersive learning environment, characterised as being relevant, challenging and real. This approach complements that of the lecture theatre, where the primary function is the imparting of knowledge: the focus is very much on creating learning 'for' as well as 'about'. Strong links to external stakeholders, including the local community, public service and business, are the access routes to real learning experiences. These relationships are significant and require investment in time and energy to ensure sponsors understand the value and impact for themselves and for students.

While enterprise education may – and does – create or unleash entrepreneurial ambitions, resulting in business start-ups, its main aim is to develop skills that cannot be acquired through conventional learning. Now, more than ever, communication, problem-solving, decision-making, creativity, collaboration and project management are essential attributes for a successful career, and a confident and fulfilling life for our graduates. For those first-generation university students who may lack social capital, inculcating these attributes through 'real-life' learning is critically important. It is suggested the value of "...learning a method... is often more important than learning specific content. In an ever-changing world, we need to teach methods that stand the test of dramatic changes in content and context".[6]

An immersive enterprise learning experience helps to grow self-confidence, resilience and social confidence, with a powerful positive impact on career trajectories, as recipients develop a greater sense of control over their futures and are better prepared to navigate uncertainty in an ever-changing world. Enterprise education worth its salt helps graduates to stand out.

5 QAA (2012) Enterprise and entrepreneurship education: Guidance for UK higher education providers http://www.qaa.ac.uk/en/Publications/Documents/enterprise-entrepreneurship-guidance.pdf
6 Neck, Heidi M. and Greene Patricia G. (2011). "Entrepreneurship Education: Known World and New Frontiers." *Journal of Small Business Management*, 49(1)

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> **❝ Enterprise education worth its salt helps graduates to stand out. ❞**

Despite the longevity of enterprise education, it is arguably time to further disrupt and challenge traditional learning paradigms to make sure that they reflect the changing landscape. Universities should become more firmly anchored in the communities they serve and play a pivotal role in unlocking and building the enterprising ambition of students. While historically this form of learning has been the domain of the Business School, universities should embrace a widening mandate and provide the necessary leadership so the approach is widely owned across the campus, exposing all students to a learning experience that focuses upon the development of the whole person in the context of unprecedented uncertainty and change.

Our experience at Teesside University, where many of our students are the first in their family to enter higher education, without any of the social capital that many others take for granted, demonstrates the enormous difference that these interventions can make to student futures. We aim to have enterprise education embedded across the curriculum, supporting students to develop work-ready skills within and beyond their disciplinary context.

The following case studies illustrate the need for and value of a range of approaches.

ExpoTees, an annual event organised by Teesside University, is a live-action pitch and exhibition embedded in the curriculum, giving hundreds of students first-hand business experience

CASE STUDY: DIGITAL STUDIO
AT TEESSIDE UNIVERSITY

The Digital Studio, operated by the School of Computing, Media and the Arts, is designed to be a hub of innovation, enterprise and employability, bringing together multi-disciplinary groups of students, graduates and staff to work on commercial digital and creative projects with and for strategic partners. Set up in January 2017, it began by employing 10 graduate interns to work on commercial and in-house projects for a minimum of three months.

The studio's primary aim is to provide work experiences for creative and digital students and graduates, giving them the opportunity to work on high-end commercial projects in a multidisciplinary real-life setting. It also enables academic staff to upskill, develop collaborative projects underpinned by their own research, and create learning materials to enhance their teaching.

The Studio was set up in response to the need to improve employment outcomes in a range of computing-related creative disciplines and address the demand for employability and entrepreneurship skills in the creative and digital sectors. This was a high priority, particularly for students from creative courses in games art and design and animation, who were emerging with an excellent level of creative and technical skill but lacked confidence and the softer, work-ready skills that employers look for.

Following the initial three months, five interns were kept on for a total of eight months mentored by academic staff and an experienced award-winning Creative Director. The work ranged from animation production on short and feature film format projects to app and online resource commissions working with Public Health England, South Tees NHS, and Cleveland Police. To develop the next group of interns, two of the original interns were employed as Production Assistant and Lead Animator for a further six months.

The Studio's USP is the ability to offer students and graduates the opportunity to work alongside staff on multidisciplinary commercial projects in real time. Further initiatives planned for the School include a Cyber Clinic, providing cybercrime advice based on the Government-backed Cyber Essentials Scheme; a Super Games Studio; and the commercialisation of student project work (creative and digital students supported to sell their work online and via the university, MIMA and BALTIC shop).

CASE STUDY: BUSINESS CLINIC
AT TEESSIDE UNIVERSITY

Developed in support of the Business School's four key graduate attribute pillars – civic in thinking; enterprising in attitude; collaborative in action; and global in outlook – the Business Clinic provides an integrated learning experience designed to build confidence, connections and creative thinking. Business management students partner with local businesses as part of the Enterprise in Practice module to work collaboratively over three months to understand business challenges, identify barriers and, in consultation with the client, develop a way forward.

The enhanced learning experience this offers for students, in writing their own curriculum, immersion in real business issues, soft skill development, CV enhancement and exposure to employers, supports current academic conversations about providing a forum to 'use, apply and act'.[7]

An example client is Daisy Chain, a local charity supporting families affected by autism. The charity needed to find a way of obtaining meaningful feedback from users to ensure it was meeting their needs, and conventional methods would not work. The Business Clinic student group talked to families, volunteers and staff, and through discussion, collaboration and a little creativity came up with a 'feedback tree' – a mural encouraging users to put up drawings about their thoughts and feelings. The feedback tree is now in place at Daisy Chain.

The success of the Business Clinic's model has prompted a move to roll it out more widely across the university, to develop cross-disciplinary teams capable of addressing multi-dimensional challenges.

7 Neck, Heidi M. and Greene Patricia G. (2011). "Entrepreneurship Education: Known World and New Frontiers." *Journal of Small Business Management*, 49(1)

Spaces that inspire
Mike Clark and Stan Stanier, University of Brighton

The scale of capital investment made in the UK higher education estate over the last five years is staggering, with some £2.75bn spent in the 2014/15 financial year alone. This is expected to continue to increase in the immediate future as the sector anticipates the true impact of our leaving the European Union.

A significant proportion has been spent on creating new academic space with the emphasis on providing the cutting-edge learning and teaching environments required to attract students in what has become and is likely to remain a highly competitive market. Opportunities also exist through the ongoing annual refurbishment of existing teaching spaces where modest investment often results in a much improved experience for the student community.

Until recently, the classroom itself changed very little over the years and it is only since the introduction of the internet, mobile technologies and the furniture industry providing innovative products that designers have been able to exploit and deliver student-centred learning experiences rather than teacher centred instruction. The 'flipped' classroom has become the embodiment of these changes. In parallel, informal learning spaces have proliferated, partly through the availability of ubiquitous wi-fi and also the willingness of universities to open up all areas of the estate where suitable facilities can be safely located.

At the University of Brighton, we created the SILS (Social and Informal Learning) Project to provide students with space to learn and socialise, to encourage active communication and to offer stimulation for users. A key factor in the success of the project was the appointment of two of our graduates to manage the project and undertake the stakeholder consultation and preliminary design work.

This was delivered in previously underutilised areas of the estate but also identified common themes which could be replicated across the estate. Student feedback has been positive. The challenge for universities is balancing the capital investment with ongoing regular maintenance of the estate as neglecting this risks the polarisation of the student experience due to visible extremes of the quality of its built environment.

Inspiring spaces do not happen by accident, they are the product

University of Brighton's Eastbourne campus

of a process of collaboration between student, academic, estates professionals and the consultant/contractor supply chain. A further consideration is that the gestation period of a sizeable capital project can be several years and this presents challenges in maintaining the continuity of personnel involved and keeping a strong nerve on the choice of technology to install, as obsolescence is only ever around the corner.

The Forum at Exeter University is such an example. Developed over a four-year period the university worked hard to maintain the knowledge base built up amongst staff working on the project, so that when people did move on, it did not have a detrimental effect on progress. The inspirational mix of indoor and outdoor space includes a Student Services Centre, library, retail and catering outlets and technology-rich learning spaces. Since its completion in 2012, it has become a key component of the university's marketing strategy proving that good design transcends conventional boundaries.

Truly inspiring spaces have to work at many levels. For the individual students it is about them gaining confidence and developing character and then through developing relationships with their peers, adapting a more collaborative approach to work and

beginning to develop and experience the type of relationships which will prepare them for the world of work. The importance of creating positive links with business and industry through contact facilitated by the estate is not a new thing, but more and more emphasis is being placed on deliberately creating opportunities for collaboration either through shared programme of study or embedding business and industry within the university campus.

The University of Brighton has recently completed a £15m Advanced Engineering Building at its Moulsecoomb Campus (see image below), establishing a world-class specialist teaching facilities alongside state-of-the-art research laboratories with its long-term partner Ricardo, the Shoreham-based global engineering, strategic and environmental consultancy and specialist manufacturer.

University of Brighton's new Advanced Engineering Building

The building will support the further expansion and enhancement of the partnership between Ricardo and the university to advance the design and development of novel low-carbon internal combustion systems, with the wider objectives of advancing technological knowledge and supporting the advanced training needs of the next generation of engineers for the region.

A similar story can be found at Southampton Solent University's new building, 'Spark', which contains teaching spaces as well as social and flexible spaces for exhibitions, shows and high-profile events. Spark's centrepiece is the full-height atrium with its distinctive Pod reflecting the nautical heritage of the region. With such distinctive features as part of the design, they provide an additional role as valuable marketing assets for the university.

One of the most interesting campus redevelopment projects recently completed is the New Academic Street (NAS) at RMIT in Melbourne, Australia – a member of University Alliance's partner group of universities, the Australian Technology Network. This A$220m project is specifically focussed on strengthening the university's connections and engagement with its surroundings in the northern parts of the city's central business district.

A primary aim was to improve the permeability of the campus (sometimes described as 'fortress-like') by allowing greater pedestrian flow and natural light to a series of planned interconnected learning and social spaces. The university it seems is deliberately creating an environment that encourages serendipity and collaboration amongst the student and staff community. Such a scale of intervention is a clear statement of the importance the university places on creating exemplar teaching spaces for the student community.

Significant resources are being applied across the global HE sector to create state-of-the-art learning and teaching environments for an increasingly discerning student community. However, one of the challenges of creating a brief for a building is the question of who the stakeholders are. For the student community, that can sometimes be a point of great debate amongst the client team as students involved at the outset of the project could have left by the time it gets on site.

It is a moot point as to whether or not we should be consulting with 14-18 year olds, as they are likely to be the initial users of the space. A further consideration is what if this cohort of 14-18 year olds have already studied in an inspiring space? Could the transfer to the higher education sector become an anti-climax for them, if we have not taken the time to learn about their experiences and preferences beforehand?

A good example of this is the Ørestad Gymnasium in Denmark. This is an open space, completely free of traditional classrooms where all activities are visible to everybody in order to facilitate student activating, collaborative and personalised teaching methods. Aside from the open physical design, its most compelling feature is that all teaching and learning materials are digital.

Another area which has led to significant progress in the development of learning environments is the use of furniture and especially where this permits flexible use of the space and empowers the user to shape their own experience. Previously seen as a secondary market by manufacturers, this has now changed considerably with global companies showing a serious interest in our sector.

Whilst the development of new state-of-the-art buildings is a complex process, regenerating learning spaces across a whole institution puts a very different perspective on the challenge to both create, and maintain, inspirational space. The University of Brighton is currently in the middle of such a challenge, having determined to refurbish all teaching and learning spaces within a five-year period through its Modern Spaces Programme (MSP). At the heart of this programme are four fundamental philosophies which drive both the design process and decision-making. These are:

Inclusivity – each campus has its own local programme group consisting of stakeholders from all academic areas based on that campus, local support staff, central space planners and technologists and student representatives. These groups determine the priority order of refurbishment projects, requirements that are specific to local subject areas and dialogue with their colleagues to ensure their views are represented. These local groups then feed into a central programme steering group which manages work projects, schedules

work and oversees liaison with contractors and project managers. Finally, a programme board, chaired by the PVC for Education and Student Experience, agrees standards and allocates budgets.

Using exemplar spaces to set future standards – instead of simply refreshing existing facilities, the MSP is looking at previous exemplar projects in Brighton to learn lessons on creating inspirational spaces, including the SILS project, the Brighton Waste House[8] and the Centre for Excellence in Creativity.[9] The MSP has also developed exemplar spaces specifically designed to best understand what inspires users in different types of spaces – from small traditional classrooms, medium-sized multi-purpose spaces to large art studios. Through gathering of feedback both during the design process of these spaces and post-occupancy evaluation, the MSP has been able to determine key standards that create a positive learning and teaching environment that fits the space function and meet subject-relevant requirements, such as writable surfaces on all available walls and comprehensive support for mobile devices, interactive touch screens and moveable furniture to allow for speedy reconfiguration.

A continuum of digital and physical – the reality of both a modern learner and the person teaching them is that of a continuum, from a digital world of the Virtual Learning Environment, social networks, online library resources and Google to the physical facilities of the learning space with direct interaction with the teacher, other learners and facilities that enable face-to-face teaching. An acceptance of this continuum fundamentally changes the approach to space design and incorporates not just technology to support teaching in the space but ensures the digital aspects of a student's learning are incorporated within the space itself – allowing both worlds to inspire and shape the use of the space.

The journey is as important as the destination – people do not close their eyes whilst moving between learning spaces and the journey to a lesson can play a key role in shaping the mood of both learner and teacher. To that end, the MSP has begun not only developing social learning spaces outside dedicated teaching space but also treating corridors and thoroughfares as significant opportunities to inspire through displays of student-generated work, staff research and key

8 http://arts.brighton.ac.uk/business-and-community/the-house-that-kevin-built
9 http://about.brighton.ac.uk/creativity/resources/downloads/Creative_space_article_11.10.07.pdf

external sources of inspiration. Such an approach embraces two key premises. Firstly, inspiration comes in many forms. Displays can be traditional posters, physical models in cabinets and sculpture as well as digital displays. Secondly, students also curate these displays which ensures materials are relevant, current and, most importantly, inspiring for their peers.

Spaces that inspire come in many shapes and sizes. We'd like to end this essay with one notable example – Building 20 at the Massachusetts Institute of Technology (MIT). It produced many breakthrough encounters in its 50-plus years, through the mixing of disciplines of work performed out in the open and of serendipity zones such as hallways and staircases as sites for productive encounters.

The building clearly inspired its occupants to do great things and it is fitting that when the building was finally demolished in 1998 and replaced by the Frank Gehry-designed Stata Center, a key requirement of the brief was to replicate the magic of Building 20. It remains to be seen if the Stata Center inspires more than Building 20.

Providing areas to collaborate and work together inside the Cockcroft Building at the University of Brighton

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A provocation
Mark Leach, Wonkhe

If there's anything guaranteed to get a politician to squirm, it's asking whether they're happy for the policies they're advocating to be applied to their own children. Take outrage at Diane Abbott sending her son to private school, or the infamous scene of John Gummer forcing a burger on his daughter in a bid to reassure the public about food safety. Ministers for universities may get the question more often than most: 'would you send your child to anything other than the (likely) prestigious university that you went to?'

Current universities minister Jo Johnson was stumped by the question on Newsnight in 2015 when it related to the private providers he was promoting, and whether he'd be happy for his children to attend them. But even if better answers had been prepared, it's hard to believe that government ministers, in Johnson's case with education at Eton and Oxford, would really be pleased about family members pursuing policies designed for the children of 'other people'.

There is a rich seam on the ConservativeHome website of articles decrying the expansion of universities. They're illiberal hotbeds of overpaid lecturers handing out firsts by the fistful to students who don't deserve to be at university. But there's also a more positive side of that argument that isn't necessarily about tearing down the sector: university isn't for everyone and you might need practical work skills instead.

However, one thing appears to run throughout the debate inside the Conservative Party at the moment and that's the idea of a real dichotomy between highly-theoretical or impractical academic learning, and vocational and technical education.

Those of us that work in education know that this dichotomy doesn't really exist, or is at best a gross oversimplification made for political reasons. But it's repeated in public debates, the media and by policymakers who should know better. The power of this idea is in its simplicity, and there's a real danger that it could cement itself in the public consciousness forever, if it hasn't already.

So it's not really a surprise that the public conception of what a university is, and does, is fairly narrow right now. We know that the most selective universities tend to be more socially exclusive – a

situation not entirely of their own making, but replicates patterns in society in which there's limited social mobility.

Most high-flying policymakers in Westminster – from government to think tanks – seem to have enjoyed a very traditional university education. Similarly, those commentating on education in the media are unlikely to have experience of college higher education, or of vocational programmes, undergraduate courses with placements, work-based learning or cutting-edge simulations of the workplace.

This won't be true in every case, but I challenge you to look around and see whether among your colleagues there is a material diversity of educational experience.

In itself, an 'academic' education is not a bad thing. The challenge for anyone thinking about higher education in the round, is to be open to the diversity of the sector – and embrace it. There really is excellence to be found everywhere, as well as the not-so-excellent experience that universities must work to limit or eliminate. But none of this runs along the lines of the age of the institution, its size, or its mission group membership.

The real problem is the idea that there's a single way of judging excellence – something the Teaching Excellence Framework (TEF) – at its best – could confront. But long-held views about prestige are hard to shift and pressure from the old elites is slowly softening TEF's sharper edges, and its ability to provide a serious challenge to the old order of things. When it comes to the crunch, ministers time and again pull back from risking the reputations or income or their favoured institutions – or forms of educational delivery.

There's a fundamental problem in the question of whether a universities minister would encourage his or her children to follow a less traditional path. It's the presumption behind the question that one is 'better' than the other in an absolute sense. Surely this discussion is all relative, what is best for the individual given their aspirations, location, prior attainment, aptitude and all manner of other constraints and enablers that makes every student unique.

Is this particular educational option the right one for me, right now? It's hard enough to know what 'right' looks like, given the

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expectation that a degree will last a lifetime. Your parents might be Eton-educated government ministers or famous journalists, but the decisions are just as complicated and uncertain.

A thorough evaluation of technical and vocational routes as well as traditional academic ones inside and outside the higher education sector is surely needed. It's no easy task and so let's not pretend that any of the choices are only right for other people's children.

ff Most high-flying policymakers in Westminster – from government to think tanks – seem to have enjoyed a very traditional university education. **"**

(Opposite page) Liverpool John Moores University delivered a multi-disciplinary learning experience in partnership with the Museum of Liverpool, Channel 4 and The Jockey Club

Project in collaboration with Aintree Racecourse, The Jockey Club

Afterword
Sam Grogan, University of Salford

As we're nearing the end of the first year of operations for the Teaching Excellence Alliance (TEA) it's timely to engage in a little reflection, look at developments to date and signal plans for the future.

(About) time for TEA
In recent years, even before the arrival of the Teaching Excellence Framework (TEF), policymakers have placed increasing emphasis on 'teaching excellence'. Against an increasingly fluid HE sector, the phrase is a now a constant in the higher education lexicon. However, whilst few would disagree with the need to recognise, incentivise, and champion teaching excellence in all its forms, it is far trickier to be explicit about what makes them excellent. Enter the TEA.

The Purpose of the TEA
Alliance universities are, and always have been, committed to teaching excellence, with a strong emphasis on technical and professional education. Building on this, the TEA develops, defines and champions our universities' distinctive teaching excellence, as well as supporting continuous improvement and professional development for teaching staff.

Developments so far
Since the TEA's inception as a broad concept a little under a year ago, we've been working hard; first to articulate our own distinctive qualities, and secondly to hone the 'toolkit' which will best serve collective development of our teaching practices, some of which are in the table below.

Co-creation/ co-production	Cutting-edge technical and professional curricula co-created with our students, employers, community groups and service users
Immersive learning and assessment	Progressive, innovative pedagogies which integrate live, employer-relevant challenges for learning and assessment, using real-world environments and simulations to provide work-based learning
Alternative provision	Alternative modes of provision (accelerated degrees, degree apprenticeships and low-residency education)
Responsive learning environments	Learning spaces that support student-focused and employer-led education

Our overarching commitment is to transforming the life outcomes for our diverse student cohorts through the development of social capital and an emphatically inclusive approach. The distinctive quality of Alliance education, and the basis for a collective edge, is the relationship between our progressive teaching and learning practices, and the particular context within which they are enacted.

We've taken these practices and played them out through an initial intensive two-day staff development event. The 'TEA Sandpit' was attended by 60 staff from across Alliance universities.

In the future, we will continue to work together to support keeping in good standing, to facilitate peer mentoring and problem solving, and to share examples of distinctiveness and excellence to develop best practice across institutions.

These developments signal an exciting year ahead for the TEA as it focuses upon building UA members as the global 'go to' for innovation and excellence in professional and technical education. Watch this space!

> **❝ Whilst few would disagree with the need to recognise, incentivise, and champion teaching excellence in all its forms, it is far trickier to be explicit about what makes them excellent. ❞**

A state-of-the-art clinical simulation centre is providing paramedic science students with the opportunity to practise working in real-life emergency settings without even stepping off campus

Based in the Faculty of Health, Social Care and Education, run jointly by Kingston University and St George's, University of London, the Paramedic Clinical Simulation Centre is packed with technology to train students for careers that will see them play a vital role assisting patients across Greater London and neighbouring regions
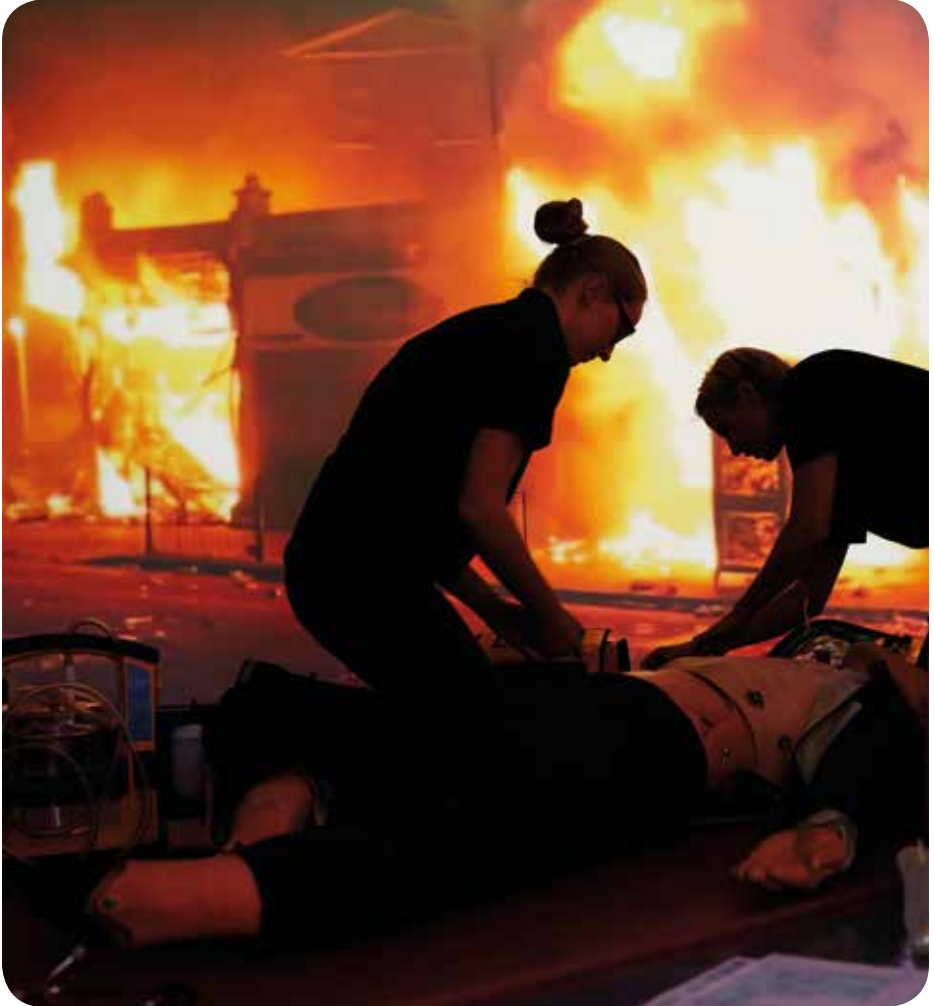
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