

Enhancing Creativity in a Post-Pandemic World: A Business Education and Creative Industries Perspective

Dr David Wheeler¹

“Britain is facing an irreversible “cultural catastrophe” with a projected £74bn drop in revenue for creative industries and the loss of 400,000 jobs as a result of the coronavirus pandemic.”

Mark Brown, *The Guardian*, 17th June 2020

“People don’t want to go back to the way things were before. They want to feel that the country is moving forward towards a better way of living. We have a responsibility to apply our most innovative minds to tackling the biggest challenges we are currently faced with, from climate change to mental health, to ensure that we can work and live more sustainably.”

**Creative Industries Federation, *Creative Coalition: A Plan to Reimagine*,
29th July 2020**

1 Introduction

These are very difficult times for the Creative Industries in the United Kingdom. Hence the 5th July announcement of £1.57bn special measures by the UK government to help sustain the sector. Even with this emergency funding support, it is by no means certain that the dramatic negative economic impacts of the pandemic identified by Oxford Economics (2020)² can be averted, particularly with respect to the myriad insecure micro-enterprises that make up the bulk of employers in the Creative Industries, and significant sub-sectors like performing arts and the venues and supply chains they support, with even the Royal Albert Hall apparently at risk.³

And yet it is a truism to observe that even before the tragic advent of the COVID-19 pandemic, we already faced an increasingly complex and deeply troubled world with dramatic new risks to be addressed and *significant new opportunities* to be pursued in the lifetimes of young people

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² Oxford Economics (2020). *The Projected Economic Impact of COVID-19 on the UK Creative Industries*. Oxford: Oxford Economics.

³ Simpson D (2020). *Culture in Peril*. The Guardian, 31st July 2020. Available from: <https://www.theguardian.com/music/2020/jul/31/i-find-myself-spiralling-the-crisis-facing-british-music-venues> (accessed 31st July 2020).

concerned about their future educational and employment prospects, including in the Creative Industries.

Thus if we are interested to make the world both more equitable and sustainable in a post-pandemic rebuild (as former United Nations Secretary General Ban Ki-moon⁴ and many others, including the UK Creative Industries Federation⁵ have argued), the development of what David and Tom Kelley of IDEO and the Stanford d-school have described as ‘creative confidence’⁶ should arguably now become a central objective for students of all disciplines everywhere. Clearly, without significantly enhanced levels of creativity, we risk returning to the business as usual behaviours that helped precipitate both the pandemic and the climate crisis.

In his 2017 book *Robot-Proof*,⁷ President of Northeastern University, Joseph Aoun identified four ‘higher order’ cognitive capacities that all university students should develop throughout their higher education journeys if they wish to prosper in an increasingly automated and artificial intelligence driven world: i) critical thinking; ii) systems thinking; iii) entrepreneurship and iv) cultural agility. Aoun further proposed that for higher learning to be effective it must be both *experiential* and *lifelong*. Finally – and this was the central to his proposals for the reform of Higher Education – Aoun argued that the only human characteristic that differentiates people from machines is their ability to be *creative* and thus enhanced creativity should be a signature outcome for all forms of university-based learning.

It is noteworthy that Aoun applied his thinking to all forms of higher education: science-based, arts-based, professional and the humanities. Entrepreneurial thinking as a cognitive capacity is just as important to future legal, medical and health professionals as critical thinking is to future managers in business or in the public sector. Systems thinking and cultural agility are just as important to philosophy and language students as they are to scientists and engineers.

Thus, questions which are emerging for business and management educators in a post-pandemic world should now include:

1) What does a business/management curriculum look like that harnesses the key ‘system drivers’ of change in the post-pandemic world and uses them to inform the development of the core capabilities referenced by Joseph Aoun (critical thinking; systems thinking; entrepreneurship and cultural agility) with enhanced creativity *and climate stability* as signature outcomes?

⁴ Ki-moon, B and Verkooijen, P (2020). Will we learn lessons for tackling climate change from our current crisis? Opinion. CNN 9th April 2020. Available from <https://edition.cnn.com/2020/04/09/opinions/climate-change-lessons-from-covid-19-ban-verkooijen/index.html> (accessed 20th May 2020).

⁵ Creative Industries Federation (2020). *Creative Coalition: A Plan to Reimagine*. Available from: <https://www.creativeindustriesfederation.com/news/federation-responds-guidance-around-ps157-billion-culture-recovery-fund> (accessed 31st July 2020).

⁶ Kelley T and Kelley D (2013). *Creative Confidence: Unleashing the Creative Potential Within Us All*. New York: Currency.

⁷ Aoun, J E (2017). *Robot-proof. Higher Education in the Age of Artificial Intelligence*. Boston: MIT Press.

2) Given the importance of i) creativity and entrepreneurialism to the future career success of all graduates, and ii) the pre-eminence of the creative industries in developing creative confidence and skills in students wishing to pursue careers in that sector, what can we learn from the processes involved in education for the creative industries that may be transferred into management education and training for other sectors? And third:

3) Given the previously assumed (pre-pandemic) growth prospects⁸ of the creative industry sector in the UK, its potentially high levels of social inclusivity and its relatively light environmental footprint, could that sector become an exemplar for a greener and more socially inclusive post-pandemic recovery, and what does that mean for mainstream business/management educators who have traditionally ignored the creative industries in both their teaching and research?

In the rest of this paper we consider the major drivers of change for graduate employment in a post-pandemic global economy and relate them directly to implications for the creative industries, to university education in general and business/management education in particular.

2 The Future for Graduate Employment in a Greener and Technologically Disrupted Global Economy

2.1 Prospects for a post-pandemic green recovery in the UK

In a recent letter⁹ to Prime Minister Boris Johnson, the UK Committee on Climate Change (CCC) recommended that the Government “*prioritise actions according to six principles for a resilient recovery*”:

1. Use climate investments to support the economic recovery and jobs.
2. Lead a shift towards positive long-term behaviours.
3. Tackle the wider ‘resilience deficit’ on climate change.
4. Embed fairness as a core principle.
5. Ensure the recovery does not ‘lock-in’ greenhouse gas emissions or increased climate risk.
6. Strengthen incentives to reduce emissions when considering fiscal changes.

If followed, the advice provided to the Prime Minister by the CCC has fundamental implications for the future of graduate employment in many sectors in the UK – from infrastructure to energy to food and agriculture to transportation to manufacturing - indeed any sector where

⁸ University of the Creative Arts *et al.*, (2020). *Creative Industries Foresight 2030*. Farnham: UCA

⁹ Committee on Climate Change (2020). Building a resilient recovery from the COVID-19 crisis. Letter to Prime Minister Boris Johnson. Available from: <https://www.theccc.org.uk/publication/letter-building-a-resilient-recovery-from-the-covid-19-crisis-to-prime-minister-boris-johnson/> Accessed 20th May 2020.

climate mitigation and/or adaptation will significantly affect how those sectors are managed and thus the nature of future work roles and opportunities within them.

Arguments for a 'green rebuild' may be expected to gather even greater political and popular support in months to come. Already the UK official opposition has identified a green recovery strategy as a central element of their policy priorities post-pandemic.¹⁰ And recently more than two hundred and fifty labour and environmental organizations have come together to call for no bail-outs for the aviation industry, further signalling the opposition of civil society to a return to business as usual.¹¹

It remains to be seen the extent to which the political consensus in the UK moves to an explicit adoption of a green economic rebuild *versus* a return to business as usual or some mix of the two.

Meanwhile, according to analysis from Oxford Economics,¹² and widely discussed in the UK media, the COVID-19 crisis has had a particularly damaging impact on the creative industries:

"The Creative Industries (CIs) are projecting a combined £74bn turnover loss over the course of 2020 compared to 2019 (-30%). This is expected to translate into a GVA shortfall of £29bn in 2020 compared to 2019 (- 25%), over half of which is in London.

The greatest turnover drop is expected to be experienced in Q2, but current projections suggest very modest improvements over Q3 and Q4 across the CIs.

In 2020, CIs are projecting a 119,000 drop in employment among employees (despite the Coronavirus Job Retention Scheme—JRS) and a further 287,000 job losses among self-employed workers, compared to 2019 levels. In total, 406,000 CIs jobs are considered at risk, 27% of which are in London and 20% are in the South East.

The greatest employment drop is expected in Q1 for self-employed, and Q2 for employees. This is because contract workers, freelancers, and the self-employed appear to have seen an immediate impact in March, while companies are expected to consider redundancies starting in Q2."

These troubling statistics make even more urgent the case for dramatic interventions by educators, especially for the Creative Industries, but arguably in all sectors of the UK Economy.

¹⁰ Walker P and Taylor M (2020). Labour to plan green economic rescue from coronavirus crisis. *The Guardian*, 17th May 2020.

¹¹ Harrabin, R (2020). Coronavirus: Don't bail out airlines, say climate campaigners. BBC, 6th April 2020. Available from <https://www.bbc.com/news/business-52190502>. Accessed 20th May 2020.

¹² Oxford Economics (2020). The Projected Economic Impact of COVID-19 on the UK Creative Industries. Oxford: Oxford Economics.

The three most significant drivers of systemic change to the world of work in terms of numbers of occupations and therefore graduate opportunities affected are threefold: the climate crisis and the transition to a circular economy, the rise of automation and associated technologies, and the rise of the ‘gig economy’.

2.2 The Impact of the Climate Crisis and the Transition to a Circular Economy on Graduate Opportunities

According to Business and Sustainable Development Commission, pursuit of the United Nations Sustainable Development Goals will unlock \$12tn annual economic growth opportunities and 380 million jobs in a wide range of sectors.¹³ Many of these sectoral opportunities relate to changes driven by addressing the climate crisis through decarbonization of energy, transportation, manufacturing, food and infrastructure sectors, whilst growing the provision of health and well-being services for demographic and other reasons. See Figure 1, below.

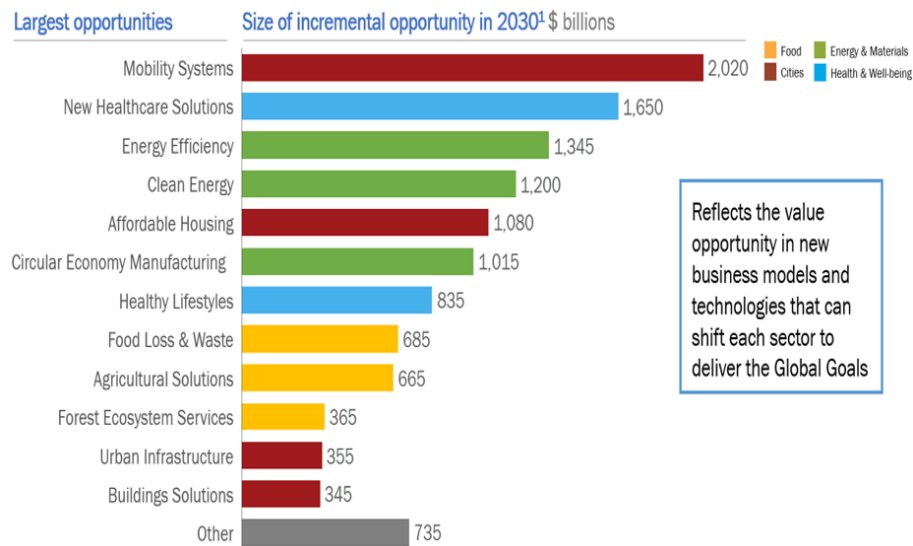


Figure 1 Growth sectors associated with pursuit of the United Nations Sustainable Development Goals (Business and Sustainable Development Commission, 2017).

A good deal of work has been done by the International Labour Organization which provides both employer and labour union perspectives on the threats and opportunities associated with future employment in a decarbonizing world. The ILO produced two significant reports in 2018 addressing these questions: *Greening with Jobs*¹⁴ and *The Employment Impact of Climate*

¹³ Business and Sustainable Development Commission (2017). *Better Business, Better World. Executive Summary*. London: BSDC, also McKinsey Global Institute (2017).

¹⁴ International Labour Organisation (2018). *Greening with Jobs*. Geneva: ILO.

*Change.*¹⁵ Supporting the analysis of the Business and Sustainable Development Commission (above), the ILO noted first that: “Between 2000 and 2015, 23 million working-life years were lost at the global level as a result of climate related disasters.” Second, that: “The phase out of fossil fuels will lead to job losses of around 6 million globally.” And third: “These losses will be compensated by creation of about 24 million jobs in the renewable energy sector, growth in the use of electric vehicles, and increases in energy efficiency in existing and future buildings, resulting in a net increase of approximately 18 million jobs globally by 2030.”

In addition to these direct impacts, both negative and positive, the broader picture for global society is even more striking if we take into account indirect effects such as those we may expect to observe in agriculture, fishing and forestry industries. According to the OECD (2017)¹⁶: “Transition to a low carbon economy will cause shifts in the volume, composition, and quality of employment across sectors and will affect the level and distribution of income. In particular, eight economic sectors employing around 1.5 billion workers, approximately half the global workforce, will undergo major changes: agriculture, forestry, fishing, energy, resource intensive manufacturing, recycling, buildings, and transport.”

Naturally, only a portion of the 1.5 billion jobs that will be eliminated, created or significantly changed as a result of decarbonization and the move to a circular economy will be graduate level jobs. However, it may safely be assumed that it will be primarily graduates that will be leading and managing the technological and institutional innovations that will deliver the changes needed to arrest and ultimately turn around the climate crisis. The question is will they possess the creative skills to do this?

And however attractive the potential for net employment growth from a serious global response to climate change and the pursuit of a circular economy, these opportunities need to be understood in the context of two other major sources of disruption to global labour (and graduate employment) markets: i) automation and associated technologies; and ii) the rapid growth of the gig economy, both of which will also change the life chances of billions of people globally in coming decades - positively and negatively.

2.3 The Impact of Automation on Graduate Opportunities

In recent years a plethora of reports has emerged on the impact of automation, artificial intelligence and associated technologies on the future of work.¹⁷

¹⁵ International Labour Organisation (2018). *The Employment Impact of Climate Change*. Geneva: ILO.

¹⁶ OECD (2017). *International Employment Implications of Green Growth. Report for the G7 Environment Ministers*. Paris: OECD

¹⁷ See for example: McKinsey Global Institute (2017). *Technology, Jobs, and the Future of Work*. New York: MGI; International Labour Organisation (2018). ILO (2018). *The Impact of Technology on the Quality and Quantity of jobs*. Geneva: ILO; Nesta (2019). *The Future of Skills: Employment in 2030*. London: Nesta; World Bank Group (2019). *World Development Report 2019. The Changing Nature of Work*. Washington: World Bank.

As with climate change and the threats and opportunities associated with decarbonisation, there will be clear sectoral winners and losers, and a very large number of jobs (more than one billion worldwide) impacted to a greater or lesser extent by the growth in these technologies. Moreover, it will not be just graduate jobs that will be impacted, and not just jobs in wealthy countries.

According to a comprehensive McKinsey Global Institute (2017) study: *“about 60 percent of all occupations have at least 30 percent of activities that are technically automatable, based on currently demonstrated technologies. This means that most occupations will change, and more people will have to work with technology....On a global scale, we calculate that the adaptation of currently demonstrated automation technologies could affect 50 percent of the world economy, or 1.2 billion employees and \$14.6 trillion in wages.”*

McKinsey also found that potential automation impacts are just as high (or higher) in many parts of the Global South, China and India compared to Western Europe, the US and Canada or Australia. See Figures 2 and 3 below.

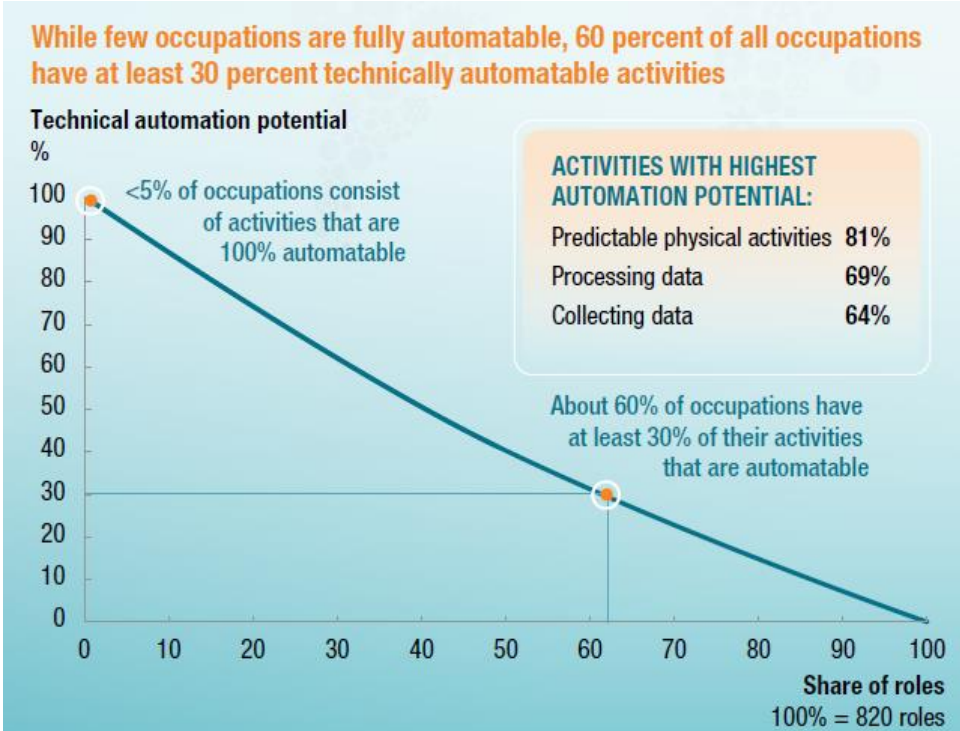


Figure 2: Impact of Automation on Global Occupations (McKinsey Global Institute, 2017).

The Countries Where the Potential for Automation Is Highest

Percentage of work activities that could be automated by adapting current technology.

AFRICA		ASIA/AUSTRALIA		EUROPE		NORTH AMERICA		SOUTH AMERICA	
Kenya	51.9%	Japan	55.7	Czech Rep.	52.2	Mexico	51.8	Peru	53.2
Morocco	50.5	Thailand	54.6	Turkey	50.4	Costa Rica	51.7	Colombia	53.0
Egypt	48.7	Qatar	52.0	Italy	50.3	Barbados	48.7	Brazil	50.1
Nigeria	45.7	South Korea	51.9	Poland	49.5	Canada	47.0	Chile	48.9
South Africa	41.0	Indonesia	51.8	Spain	48.5	U.S.	45.8	Argentina	48.2
		India	51.8	Germany	47.9				
		Malaysia	51.4	Greece	47.8				
		China	51.2	Austria	47.4				
		Russia	50.3	Switzerland	46.7				
		Philippines	47.9	Sweden	46.0				
		U.A.E.	47.3	Netherlands	45.4				
		Oman	46.8	France	43.1				
		Bahrain	46.1	U.K.	42.8				
		Saudi Arabia	46.0	Norway	42.4				
		Australia	44.9						
		Singapore	44.2						
		Kuwait	41.1						

Figure 3: Impact of Automation on Selected Countries (McKinsey Global Institute, 2017).

Based on these two major drivers: how the world responds to the climate crisis and the rise of automation and associated technologies, we may safely conclude that hundreds of millions of future graduate employment opportunities will be linked entirely to the effectiveness with which these drivers are harnessed and leveraged by employers in the ‘opportunity category’ rather than the ‘risk category’. This will in turn be driven by public policy and the response of educational systems to adapt quickly enough to provide the creative human talent required to pursue opportunity and minimise risk, both at an individual and at an organisational level.

However, there is a third factor to be considered, particularly in a post-pandemic world. And that is the structure of the workforce within which future graduates will be absorbed. It is entirely possible to imagine both dystopian as well as utopian responses to the challenges that lie ahead. Some of the biggest risks and opportunities with respect to the future for secure, well paid graduate employment reside in the emergence of what is increasingly recognised as the rise of the gig economy.

2.4 The Impact of the Rise of the Gig Economy on Graduate Opportunities

According to Morgan Stanley (2018)¹⁸ “Freelancers represent 35% of the total U.S. working population and could represent more than half of the country’s workforce by 2027”.

¹⁸ Morgan Stanley (2018). The gig economy goes global. Available from <https://www.morganstanley.com/ideas/freelance-economy>. Accessed 22nd May 2020.

Meanwhile, in “the United Kingdom, France and the Netherlands, freelance growth has outpaced overall employment growth. The number of freelancers in the European Union (EU-28) doubled between 2000 and 2014, making them the fastest growing group in the EU labor market”.

Partly driven by the kind of technological change referenced in the last section, these staggering statistics mask two competing narratives that are running in parallel. The first is the somewhat utopian vision of largely white collar workers (and therefore graduates) in the service, ICT and creative industries increasingly working from home with one or more secure sources of contractual work that are sufficiently well paid and secure to be able to provide for adequate income and work-life balance. The pandemic-related lock downs have given rise to much whimsical commentary on WFH (working from home) for those able to do it, with technology firms like Facebook, Microsoft and Google signaling that their employees may work from home until 2021 or even indefinitely.¹⁹

The more dystopian vision is that of both white collar and blue collar workers (especially those working in outsourced health services, hospitality and other low wage sectors) living from precarious contract to precarious contract or on ‘zero hours’ contracts with no economic security and no work-life balance, with power shifted even more decisively to major employers and away from their (largely non-union) contractors.²⁰ It is partly for this reason, and certainly accelerated by the elimination of austerity economics as a result of the pandemic, that concepts such as the universal basic income (UBI) have been gaining greater traction in recent months.²¹

Given the nature of political and economic forces at play, and the need to rebuild social and economic cohesion post-pandemic, it is helpful that the International Labour Organisation has already identified the need for a ‘human centred’ agenda for the future of work. In *Work for a*

¹⁹ Gartenberg, C (2020). Google says that the majority of its employees will work from home until 2021. The Verge, 8th May 2020. Available from: <https://www.theverge.com/2020/5/8/21252240/google-employees-essential-staff-remote-work-from-home-2021>. Accessed 22nd May 2020.

Ortutay, B (2020). Working from home post-COVID-19? Facebook, Apple, Twitter and Microsoft embracing remote work. USA Today 22nd May, 2020. Available from: <https://www.usatoday.com/story/tech/2020/05/22/coronavirus-remote-work-post-pandemic/5242420002/> Accessed 22nd May 2020.

²⁰ Ironically, universities are among the more egregious proponents of gig economy related exploitation, increasingly relying on an underclass of relatively low paid contracted teachers to deliver up to 50 per cent of their programmes in some countries: Collini, S (2018). *Speaking of Universities*. London: Verso.

²¹ Henley, J (2020). Finnish basic income pilot improved wellbeing, study finds. *The Guardian* 7th May, 2020. Available from: <https://www.theguardian.com/society/2020/may/07/finnish-basic-income-pilot-improved-wellbeing-study-finds-coronavirus>. Accessed 22nd May 2020. It is perhaps salient to note that technology entrepreneur Elon Musk has long been an advocate of UBI based on his fears for the dangers of automation for social and economic cohesion. See: Barnard, M (2019). Elon Musk’s long-standing support of basic income. *CleanTechnica* 24th August, 2019. Available from: <https://cleantechnica.com/2019/08/24/elon-musks-long-standing-support-of-basic-income-thus-support-of-andrew-yang/>. Accessed 22nd May 2020.

Brighter Future,²² the ILO summarised some of the most influential reports on the potential for automation to disrupt labour markets (see Figure 4 below), integrated those analyses with concepts of social equity and sustainability, and concluded by proposing “a human-centred agenda for the future of work that strengthens the social contract by placing people and the work they do at the centre of economic and social policy and business practice. This agenda consists of three pillars of action, which in combination would drive growth, equity and sustainability for present and future generations.”

	SOURCE	ESTIMATES
Technology	Frey and Osborne, 2015	47 per cent of workers in the United States are at risk of having jobs replaced by automation.
	Chang and Phu, 2016	ASEAN-5: 56 per cent of jobs are at risk of automation over the next 20 years.
	McKinsey Global Institute, 2017	While less than 5 per cent of all occupations can be automated entirely using demonstrated technologies, about 60 per cent of all occupations have at least 30 per cent of constituent activities that can be automated.
	OECD, 2016	An average 9 per cent of jobs in the OECD are at high risk of automation. A substantial share of jobs (between 50 and 70 per cent) will not be substituted entirely but a large share of tasks will be automated, transforming how these jobs are carried out.
	World Bank, 2016	Two-thirds of jobs in the developing world are susceptible to automation.
	WEF, 2018	Nearly 50 per cent of companies expect that automation will lead to some reduction in their full-time workforce by 2022.

Figure 4 Analyses of Automation Impacts from Various Sources (ILO, 2019).

2.5 Summary and Implications

The world really does now stand at a crossroads, and momentous political and economic decisions remain to be taken as to which direction the UK and indeed the rest of the world now pursues post-pandemic. A post-pandemic world could be very green and socially inclusive, harnessing the best of human creativity for transition to a socially just, low carbon, sustainable and circular economy, or it could be increasingly dystopian with the impacts of climate change

²² International Labour Organisation (2019). *Work for a Brighter Future*. Geneva: ILO.

and inadequate levels of secure and well-paid employment leading to greater social dislocation and hardship.

If we accept that - based on positive social and environmental values - human ingenuity and creativity will help make the difference, it is now important to examine the potential role of the creative industries in a post-pandemic world and to explore whether the sector may become an example that society, and indeed the rest of the UK economy needs to emulate.

3.0 Creative Industries as a Potential Exemplar for Green and Socially Inclusive Recovery in the UK

One of the more striking observations that we might make of the analysis above, is that the creative industries are rarely foregrounded as a growth sector whose prospects may actually be enhanced by forces related to the climate crisis and technological disruption. Clearly there is something about the perceived nature of the creative industries - perhaps their products, their histories or how they are organised that give the sector its current fragmented, 'Cinderella' status. And yet, despite the severe challenges and overwhelming uncertainty being faced currently, it is the creative industries sector that may have as much to offer as any sector in a post-pandemic world with respect to championing creativity and innovation, the active adoption of digital and other technologies, the exhibiting of lower ecological footprints per unit of economic activity, and – potentially – the transition to a fairer society where the gig economy results in *more* rather than less economic stability for workers in a sector that is dominated by small, medium and micro-enterprises.

According to a recent report by the University for the Creative Arts (UCA) and others²³ the Creative Industries were set to grow faster than the rest of the UK economy reaching a Gross Value Add (GVA) of around £300bn by 2030, representing up to 11% of UK GDP. Businesses in the interface of creative industries and technology (a sub-sector now characterized as 'CreaTech') was growing ten times faster than the sector average and could have accounted for nearly 40% of employment in the Creative Industries by 2030. In 2030 there were projected to be more than 350,000 micro, small and medium sized businesses in the Creative Industries, 95% employing fewer than ten people. Physical and digital exports were expected to exceed £100bn by 2030, up from approximately £46bn today.

So under any analysis, and particularly given the severe impacts of COVID-19, this is a sector to be strategically nurtured and supported, and not simply bailed out. The UCA report made a number of public policy and fiscal recommendations aimed at addressing the current lack of influence and fragmented status of the sector, including how the broader issues of sustainability (and therefore climate change and the transition to a circular economy) and

²³ University for the Creative Arts *et al.*, (2020). Creative Industries Foresight 2030. Farnham: UCA

Industry 4.0 (and therefore technology) can be embraced for strategic advantage and national competitiveness.

The report identified four trends that could re-shape the sustainability of the UK Creative Industries over the next decade:

1. *Automation to support creatives, and improve productivity as well as drive energy and resource efficiency²⁴*
2. *Growing awareness of the urgency to address climate change, and appreciation of the need for more action by the Creative Industries*
3. *Growing social engagement in the Creative Industries (local, regional and national)*
4. *Innovative design (eg to address the needs of products, services and experiences in a more Circular Economy)*

The report also identified four trends that could re-shape the UK Creative Industries over the next decade with respect to Industry 4.0 developments:

1. *UK Creative Industries export growth (creating economic and cultural value)*
2. *Greater competition for audience and consumer attention, making for a more competitive environment (referred to as the 'attention economy')*
3. *Digital creation (eg of content, product designs etc).*
4. *Sustainable design (eg to address the needs of products, services and experiences in a more Circular Economy).*

It is clear from the foregoing that within a new public policy framework that addresses the current crisis in the sector, the Creative Industries could be a major contributor to a post-pandemic green and technological recovery in the UK. But this will only happen if public policy and fiscal changes occur, fragmentation of the sector is addressed, and concepts like Sustainability and Industry 4.0 are embraced strategically. The human capital gaps identified in the UCA report also require urgent attention.

4.0 Educational Responses Required

The UCA report offers detailed suggestions for how education for the Creative Industry sector could be enhanced, assuming the drivers noted in this paper can be harnessed for “the future opportunity and competitiveness for the UK economy, and the source of future employment.”

Key insights with respect to the role of education, embracing both sustainability (including climate and the transition to a circular economy) and Industry 4.0 (including automation and other drivers) included:

- *There is an immediate need for a digital upskill for executives in Creative Industries*

²⁴ Creative Industries are viewed as relatively resilient against job losses due to automation

- *Technology companies may be sources of investment and education delivery. Industry 4.0 is capital intensive and changes rapidly so there is a need to find new ways to fund initial outlay and an on-going refreshment, so students are always trained on the latest technology*
- *Standalone venues and centres within universities and / or science museums need to be developed to showcase, demonstrate, and enable a hands-on feel for new technologies. This could be part funded by the technology industry, or new subscription rentals developed for continuous upgrading to new iterations or version of the technology (as Apple does for iPhones)*
- *Vocational training for Industry 4.0 should not be ignored as there are many technical, trade and artisan roles in the Creative Industries and a shortfall of candidates. It is worth noting that an increasing number of people enter the Creative Industries with no formal Creative Industries skills education; they have either learnt from sources such as YouTube (e.g. video editing skills) or working in informal groups (e.g. a common entry point for music)*
 - *Universities and business schools should help shape opinions, making better use of case studies and example to be better connect with those in the Creative Industries. This should include bringing in more industry people to talk about Sustainability success stories within businesses in the Creative Industries*
 - *An action focus for Sustainability education and skills development to give people in the Creative Industries tools that allow them to make a difference quickly. This could mean education and training designed to be granular, bite- sized, or micro-modular and immediate, more like 'Life hacks'. This might be based on blended learning model e.g. a mix of online and face-to-face content*
 - *Since the Creative Industries are so fragmented, cross-vertical collaboration on Sustainability is important and this might be enabled by online conferencing and other tools*
 - *Sustainability education should be mandated and integrated in all undergraduate courses*

These ideas all need much greater elaboration. But there is no reason why the skills gap identified in the UCA report should not be bridged with sufficient investment in enhanced, flexible and accessible academic and vocational education provision for the Creative Industries. This provision can itself harness the changes that are underway in higher and further education with respect to pedagogical and technological innovation and novel credentialing as Cathy Davidson and others argue²⁵ and with respect to outcomes focused on creativity as Joseph Aoun advocates.²⁶

However, with the overwhelming majority of the sector organised in micro and small enterprises, and with the ever-present danger of negative gig economy trends emerging, there

²⁵ Davidson C N (2017). *The New Education. How to revolutionize the university to prepare students for a world in flux*. New York: Basic Books.

²⁶ Aoun, J E (2017). *Robot-proof. Higher Education in the Age of Artificial Intelligence*. Boston: MIT Press.

will need to be serious innovation by educational providers in addition to governmental support for learning if it is to be accessed and harnessed effectively. In this respect, a targeted Universal Basic Income for gig workers in the creative sector perhaps linked to a requirement for educational engagement may be one way to address the challenge of how to radically and rapidly up-skill the sector in the light of both known and emerging future trends.

But this thinking should not be limited to education for the Creative Industries. As noted earlier, there is much that is not working with current higher education provision around the world, including business/management education. In the US, the under-performance of universities in equipping graduates for the workplaces of the future is now recognised as a serious problem by commentators as diverse as Bill Gates²⁷ and celebrated technology-disruption guru, the late Clay Christensen of the Harvard Business School. Even pre-pandemic Christensen, author of *The Innovative University*,²⁸ was predicting in 2018 that due to the emergence of online provision at much greater value for money than traditional offerings, 50 per cent of all US colleges and universities would be bankrupt within 10-15 years.²⁹

It is by no means clear that the current model of UK universities is any more resilient than that of the US, especially when it is confronted by the same value for money criticisms, an over-reliance on international student fees, and the relative under-preparedness to teach online both before and during the pandemic.

Thus we may argue that all university education, including in the UK, and including of course business/management education, now requires some level of reform.

That reform needs to pay serious attention to:

- 1) The importance of developing higher order skills identified by Aoun (2017): critical thinking; ii) systems thinking; iii) entrepreneurship and iv) cultural agility as fundamental to the success of all graduates.
- 2) Assimilating sustainability drivers (especially climate and the transition to a low carbon economy), and Industry 4.0 drivers (especially automation and associated technologies) into all curricula.
- 3) Leveraging technology (and its disruptive potential) both in how teaching is conducted and the technology management skills required by all graduates, as advocated by Davidson (2017).

²⁷ Gates, W (2014). The future of college. Available via: <https://www.gatesnotes.com/Education/The-Future-of-College-NACUBO-Remarks>. Accessed 24th May, 2020. The Bill and Melinda Gates Foundation is also backing the [Post-Secondary Value Commission](#) which is due to report this year.

²⁸ Christensen, C M and Eyring, H J (2011). *The Innovative University: Changing the DNA of Higher Education from the Inside Out*.

²⁹ Hess, A (2018). Harvard Business School professor: Half of American colleges will be bankrupt in 10 to 15 years. CNBC 30th August 2018. Available from: <https://www.cnbc.com/2018/08/30/hbs-prof-says-half-of-us-colleges-will-be-bankrupt-in-10-to-15-years.html>. Accessed 24th May, 2020.

4) Placing the development of 'creative confidence' at the heart of the learning journey for all higher education learners, regardless of programme.

Within such a framework, any university in the UK would be well placed to deliver for the Creative Industry sector and indeed all sectors employing UK graduates, the talent that will be required to build a greener, fairer and more technologically inspired recovery from the pandemic.