Future Teaching trends: education and society

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Introduction

This review partners with *Future Teaching trends: science and technology*, providing a short overview of the global societal shifts likely to impact on education over the coming few decades, in order to inform the Near Future Teaching project. It is not a comprehensive review: rather it highlights a few key areas we feel are of particular relevance.

Recruitment demographics

Global competition

While demand for higher education globally continues to rise, the growth in numbers of students studying overseas is projected to slow over the next decade, with increased local investment in higher education prompting more students to choose to study in their own country (British Council 2018). Global competition for these **international students** in the coming decades will be robust, with the UK facing challenges around Brexit and the rise of nationalist-populism, increased visa and travel restrictions and the impact of perceived or real xenophobia on the recruitment of international students (de Wit 2018). Numbers of non-EU students coming to the UK have remained generally static since 2011 (UUK 2018).

Alongside this is the competition posed by the rising numbers of **courses delivered in English** across Europe (Sandström and Neghina 2017), ambitious national policies for expanded internationalisation of HE from many governments (British Council 2018) and HE expansion policies in China, India (Morgan 2016) and others. While the number of undergraduate applicants to UK universities from the EU rose by 3% in 2018 compared with 2017 (Adams 2018), the long-term prospects for student mobility post-**Brexit** are still unclear.

UK demographics

As demographics shift in many Western countries – including the UK – declining numbers of young people to recruit from among the domestic population make it likely that growth will lie partly in our ability to reach **underserved students in low and middle-income** countries through online education, and partly in our ability to reach out to new parts of the domestic population, including older students (Choudaha and van Rest 2018) and **groups which have not**

traditionally entered higher education. In the UK, while the proportion of those aged 20 and under entering university is at its highest (41%), participation by 25-29-year olds and those over 30 has dropped since fees were increased in 2012-2013 (HESA 2017a). In the UK part-time enrolments have dropped by 56% since 2010 due to changes in government policy (HESA 2017b).

Lifelong learning

Ageing population

Globally, life expectancy is growing as overall fertility declines (British Council 2017). The UK population is rapidly ageing with the population aged over 60 expected to grow to 21.9 million people by 2039 (Government Office for Science 2017). This ageing population has profound implications for higher education, with the call for increased retirement ages and longer productivity suggesting a need for **re-skilling** opportunities through flexible lifelong learning (BIS 2013). This is likely to require creative responses from universities, with online education, 'unbundled' curricula, competency-based programmes, peer to peer learning models, micro learning at the point of need, experiential learning, and 'stackable degrees' all playing a role (Frey et al 2016).

Diversification of provision

The narrative of higher education as a driver for economic growth will persist, yet it will not come without challenges as the educational marketplace diversifies and core university practices are called to account for how they serve overall growth. The emergence of alternative providers, including growth in numbers of **private universities**, is likely to shift the overall landscape of higher education. These shifts are often contentious: lifelong learning is regularly critiqued as a neoliberal model designed to educate flexible subjects for the corporate job market (Regmi 2015), employers are criticised for cutting back on workplace training, shifting the impetus for re-skilling to the workers themselves (Winterbotham et al 2014), while the **social mission** of universities is seen by many to be obscured by the push for economic growth.

Unbundling and new degree models

'Disruption'

'Unbundling' refers to the disaggregation of higher education into its component parts (for example the separation of teaching from research; the outsourcing of student support and assessment; the breaking down of academic work into para-academic service roles and so on). Fuelled by the for-profit sector and happening as the expansion of higher education drives up the cost for governments and individuals, proponents of unbundling see in it a positive disruption which will make higher education more market-driven and ultimately more affordable, with a greater focus on employability, flexibility and personalisation. MOOCs and the various **new credit models** emerging from these as they evolve are one current example of unbundling.

Criticism of unbundling focuses on its reduction of higher education to a service industry for employers, the elimination of the idea of higher education for the public good and its colonisation by the values of Silicon Valley. It also suggests that unbundled teaching lowers standards, that the fragmentation of the teaching environment and student support has a negative impact on learning,

particularly for non-traditional students, and that the uncoupling of teaching and research pushes universities into impoverished, transmission-based models isolated from the **research leading-edge** (McCowan 2017).

Aligned with this trend long, fixed-term degree models are under pressure in the UK and elsewhere, with a government shift toward promotion of **'fast-track'** degrees and professional development across the life course, a push for modular, flexible, blended and professionally-oriented provision (Wicklow 2017), and the introduction of degree apprenticeships.

Automation

According to PWC, upwards of 10 million jobs in the UK are at some risk of automation (2017), with resilience to automation driving a significant amount of the assumed need for the re-skilling of the population. Cities and regions that have invested in highly skilled industries will present more resilience to automation, with an emphasis on professions dependent on '**uniquely human**' skills (Frey and Osborne 2013).

Automation of teaching

There has been much research and debate across all sectors of education concerning how automation might influence the future of teaching and learning. Research has focussed for the most part on automation of aspects of the teacher function, rather than on automation of teaching itself. For example, how learning analytics might help learning providers limit attrition (Arnold and Pistilli 2012), target support or personalise feedback (Liu et al 2017); how personalisation of learning might be enabled by adaptive learning aided by artificial agents; how automated assessment systems might assist teachers with some of the heavy-lifting of marking and grading; or how automated assistants might help with the routine administration and delivery of aspects of teaching in at-scale classes (Pardo et al 2017).

Often, such approaches are welcomed as offering the potential for **efficiency** gains within the sector: for some they offer an opportunity for education to become more **inclusive** (for example by making delivery at scale in resource-poor regions feasible), or for enabling mass re-skilling in the face of rapid changes in the labour market. For others they are seen as a negative measure reducing the broad educational mission to demand, supply, efficiency, effectiveness and consumer need. With the UK educational technology market experiencing annual growth at 22% (EdTechXGlobal 2016), some see automation of teaching in terms of economic and industrial growth, while others see it as a dangerous incursion of for-profit interests into the core, **humanistic values** of education as a public good.

Cities

Data published by the United Nations shows that the world's cities are growing in size and in number (UN 2016). By 2030, 27% of the world's population is likely to be concentrated in cities with at least 1 million inhabitants. Increased migration toward cities brings increased densities of intellectual and financial

capital often with subsequent economic growth. The economic growth of some urban EU regions is linked to the share of adults with tertiary education (Sterlacchini 2008).

This trend points toward an intensification of the relationship between urban universities and their host cities. As one example, the City Deal programme serving South East Scotland with its emphasis on data science aims to position the city of Edinburgh and its universities as key drivers of economic growth by providing data skills to the entire region (University of Edinburgh 2017).

Wealth and inclusion

Those reaching young adulthood in the early 21st century face becoming the first ever generation to record **lower lifetime earnings** than their parents. Research shows that current 27-year olds are earning the same amount that 27-year olds did a quarter of a century ago, and the average 'millennial' has actually earned £8,000 less during their twenties than those in the preceding generation (Gardiner 2016).

Widening participation

Compounding these lower earnings, the expansion of higher education has brought with it rising student fees alongside ambitious targets for **widening participation** as a strategic priority for both the UK and Scottish governments. By 2030 the Scottish Government target is for students from the 20% most deprived backgrounds to represent 20% of entrants to higher education (2016), aided by provision of financial support to offset fees and living costs (2017), as well as by measures of pastoral care provided at the university level (University of Edinburgh 2015) specific to students from non-middle class backgrounds.

Trust and precarity

Europe, the UK, and the US are said to be facing a 'collapse of trust in institutions' (government, media and business) (Edelman 2018), which is aligned to a reduction in the perceived social value of universities made manifest through extensive public questioning of the economic worth of a degree, levels of vice-chancellor pay and calls for greater 'relevance' and for greater public **accountability**.

This erosion of trust plays out even as higher education continues to contribute to the overall growth of the UK **economy**. UK higher education is internationally competitive and world-renowned, generating £73 billion annually for the British economy and contributing 2.8% of UK GDP. Universities generate over 750,000 jobs and around £11 billion of export earnings for the UK annually (Universities UK 2017).

Academic precarity

Yet employment within higher education is increasingly precarious as 'unbundling' pushes at the traditional academic role. In 2015-16, 36% of all academic staff were on fixed-term contracts, with 55% of those aged under 40. When the use of atypical academic staff is factored in, 54% of all academic staff and 49% of all academic teaching staff are on insecure contracts (UCU 2016).

This outpaces overall trends in the UK towards precarious work as the number of self-employed increased from 12% of the labour force in 2001 to 15% of the labour force in 2017 (Office for National Statistics 2018).

The precarity of academic work was a contributing factor to a labour dispute in the UK in early 2018, as a nationwide strike in the HE and FE sectors against pension cuts exposed tensions between staff and university leadership around accountability and transparency of university governance.

This brief review should be read alongside the companion piece *Future Teaching trends: science and technology*, which extracts key technological trends emergent with the broad social issues described here.

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