

# Employability and the digital future of work

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## Abstract

This paper discusses the role of networked technologies in education through the lens of work, both the work carried out by academic and professional staff – refigured by the demands of digital institutions – and the 'employability' of graduates and college leavers that stands over their educational experience as its rationale, justification and end-point. The paper draws on a recent literature review and interviews with staff in UK tertiary education to identify changes in the nature of academic work and corollary new demands on education professionals to develop their digital capabilities and engagements. It goes on to suggest that these changes are exemplary of large-scale shifts not only in the kinds of work people do but in the way work is valued, engaged in, and managed through the lifecourse. It concludes by arguing that 'employability' needs to be opened up within the curriculum as a critical exploration of what it means to thrive in a digital society.

## Introduction: beyond the network

The discourse of 'networked learning' has always run at an angle to mainstream accounts of educational technology, characterised by what Selwyn and Facer (2014) call 'technocratic discourses of "effectiveness" and "best practice"' (p. 488). A focus on the *network* has allowed theorists and educators to look beyond particular interventions to the social contexts of technology use and of learning (e.g. Steeples et al. 2002; Hodgson et al. 2012). As Hodgson *et al.* put it, there is a need for theory that can '*transcend the dualism between abstract mind and concrete socio-material practice*' (p. 292), or between technologies and the meanings and uses made of them by actors in different situations.

Since networked learning conferences and journals became established at the turn of the millenium, the effects of networked technology at the level of society, the economy and polity have become pervasive. No longer just a mediating context for learning/teaching relationships (vital though that context and its research continue to be), the digital network has completely refigured educational institutions and the economies of knowledge in which they operate, including global markets in students and the funding mechanisms for teaching and research. In this context we need to consider the entanglement of all teaching-learning relationships with the materialities of the global internet.

Fuchs, in a critique of Castell's (2012) *Networks of Outrage and Hope*, chastises him for failing to appreciate that the network is made up of '*human actors who are embedded into antagonistic economic, political and ideological structures of society*' (Fuchs 2013). Implicitly, those 'structures of society' cannot be analysed in terms of local interactions and effects. Network thinking offers explanations at the level of interpersonal events and within-

network cultures. To ask how digital networks are changing the value of learning, the nature of educational organisations, and the nature of knowledge-based work, is to engage in explicitly political and sociological modes of enquiry.

'Framing the digital capability of staff in UK HE and FE' was a publicly funded project involving a literature review, a review of current frameworks describing digital capability, and interviews with more than 60 professional and academic staff. Interviews centred on the digital capabilities staff need to do their work, but the changing nature of work itself emerged as a powerful theme. With permission, I have drawn on those interviews. The funded work is reported elsewhere (Beetham 2015): the analysis offered here is based on a selected sample of interviews and is entirely my own.

### **Academic work in the digital age**

In 2010 a report by HEFCE on the future of employment in UK HEIs noted that:

*Advancing technologies and technology-based services will [require] HEIs to rethink the ways in which they add value... Technology also has the capacity to revolutionise the managerial and administrative functions of an HEI, enabling it to operate enhanced process efficiency or highly effective information and data systems.'*

There is every reason to believe that the nature of academic work is changing and that 'advancing technologies' have at least a supporting role to play (Callender and Scott 2013, Gornall *et al.* 2014, Selwyn 2014). According to my study, these changes can be characterised as: insecurity; rapid cycling or shortened timescales; blurring of boundaries between personal and work time / space; disaggregation of the 'functions' of academic work; continual monitoring and assessment of 'performance'; entrepreneurialism; and the transfer of academic management/organisation to digital systems. All of these features have the capacity to exacerbate inequalities among staff and institutions, and to compromise wellbeing at work in various ways.

### **Insecurity**

In 2013, 36 per cent of UK HE staff were on fixed-term contracts (Chen and Lopez 2013) and 53 per cent of UK HE institutions had used zero hours contracts for academic posts (UCU 2013). A third of Australian university staff are now employed on a fixed term or casual basis (NTEU 2015) and in the US, only a fifth of University academic staff are full time and tenure track (AAUP 2015). Explaining the rise of the digital 'gig' or piece-rate economy to US readers, Friedman (2015) uses casual academic staff as a primary example. Along with increased casualisation of academic work have come other sources of insecurity such as restructuring and department/unit closures.

Digital technologies promote insecurity both directly – enabling organisations to carry through changes in the name of flexibility and efficiency – and contextually, by removing barriers to a global market in learning and in students who want to learn. Digital technologies have ushered in cheap online equivalents to some higher qualifications, threatening the business models of mainstream HE institutions for whom qualified, co-located teaching staff suddenly seem like an expensive overhead. 'Innovation' as an agenda – itself strongly associated with the use of digital technology – is also experienced by staff as a direct source

of insecurity.

*All institutions want to be seen to be doing something innovative - looking for new markets, changing the teaching model. The whole technology agenda has brought things a bit to a head where institutions are saying 'we can't just carry on as we were'.*

### **Academic time and space**

Administrative and organisational aspects of academic work are now often organised in flexible, multi-role teams with short-term objectives (Ylijoki 2014). Even the core work of teaching students has become focused on achieving short- or medium-term 'enhancements' to curriculum offerings. One of my interviewees felt that when *'teaching is being treated as a commitment to a particular course of study, which has to deliver on particular outcomes – things like student employability, student satisfaction, student retention etc – that undermines the traditional teacher/student relationship and the way it is built over time.'*

In my interviews, technology was often seen as changing the quality of academic time. One theme was the experience of digital connectivity as a command to be *'always available'* to communicate with students and colleagues. Another was the feeling that there would *'never be enough time'* to catch up with the digital prowess of expert colleagues or (again) students. Practices such as blogging and releasing lecture materials online - freely entered into by some staff as experiments in academic communication - have been reified as 'good practice', and the time other staff have *not* invested in these skills have become both an implicit criticism and an insurmountable barrier.

If the time of academic work seems to have contracted, its spaces seem to have extended beyond bounds. The rise of open offices, hot desks, home working, multiple campuses and virtual environments have created an expectation that academic and professional staff will work wherever they have space to open a laptop or view the screen of their mobile device. The open spaces of the internet support new modes of scholarship and new forms of scholarly identity (Weller 2011, Stewart 2015), and my interviewees were enthusiastic about these opportunities. But as with academic time, these digital spaces too easily become subject to scrutiny and exhortation on the part of the institution, or in a more complex response to the insecurities already discussed, become sites of anxious reinforcement rather than positive identity work.

### **Monitoring and performance management**

In line with these observations, Callendar and Scott (2013) have warned that recent shifts of power and emphasis in UK HE mean *'collegially determined (and largely self-policing norms), rooted in trust, could be replaced by performance measures and management targets'*. In my interviews, performance measures came up repeatedly in the guise of 'data' that needed to be carefully managed if institutions, departments and individuals were to thrive:

*individuals are now increasingly expected to not just access the data but to update and manage and use it for all sorts of monitoring purposes;  
People come into the profession because they genuinely want to help other people, but as they go through they come to realise the importance of data and sometimes become very adept at... managing, manipulating and utilising data for the institution.*

Dealing with these data – citation indices, REF scores and research grant incomes for individuals, NSS, DLHE statistics, KIS data and other numerical targets for departments and courses – is not just extra work. They are increasingly used to determine the *value* of work in the academic sphere. Data-driven performance management creates new stresses, and risks undermining the narratives that have defined academic work as intrinsically motivating, for example through intellectual engagement, involvement in a scholarly community, and care for students' development.

### **Disaggregation and stratification of academic work**

In line with the increased monitoring and assessment of academic work has come a tendency to disaggregate that work into separate 'functions,' each with their own indicators of value. Until recently, teaching has not been subject to the same thorough-going regime of monitoring, quantification and differential reward as research. Nevertheless it has resolved into a number of roles with different status markers: course development and validation, classroom and online teaching, supporting student learning, and the production of learning materials. Learning materials have become further divorced from particular contexts of teaching / learning as the technologies of production have advanced. Students are often seen as driving this trend with their expectation of access to online content, but the real beneficiaries may be educational employers who find that teaching labour can be stratified, and the value of that labour realised many times over once it is reified in materials for which they – and not their staff - usually hold the intellectual property rights.

There are good pedagogical reasons for teachers to adopt a distance from the body of subject knowledge, for example so they can engage with students in roles of co-construction and collaborative enquiry. Many of my interviewees approved of these developments.

*The role of the teacher is changing. Even without technology... the role is much more of a mentor [now].*

The digital network, conceived of as a knowledge commons, can play a powerful role in enabling and validating these new pedagogical relationships. But educational organisations are often more eager to use the network as a reputation management tool externally – promoting a small number of teaching 'stars' on the digital stage – and/or as a content management tool internally – ensuring students have ready access to established texts. As a result, teachers can become alienated from the content they teach with, and from more organic forms of practice in which subject knowledge, teaching craft, and an awareness of students' learning needs are fully integrated. Such organic practices have become figured as costly and inefficient.

*Managers ... think you can just turn courses into blended learning and then save time and money. They don't understand how much time you invest in developing good, engaging activities for students, and then facilitating them.*

### **Entrepreneurialism and individualism**

The new modes of academic work offer a new kind of self-worth built on entrepreneurialism. In research terms this principally the capacity to attract funding. In teaching terms it is the capacity of staff to reinvent themselves and their practices, especially in relation to digital technologies.

*We are always in teaching being called up on to see ourselves in relation to central initiatives or drivers now.*

This reinvention is supported by a host of 'new professional' staff who have emerged in the last 15-20 years (Hudson 2009, Barnett 2013) and have further supported the disaggregation of teaching functions: learning technology staff are in some ways paradigmatic of these new roles (Beetham *et al.* 2001, Mears and Harrison 2013). Structurally, new professionals are associated with entrepreneurial functions of the institution: employed across departmental structures and staff roles; instrumental to central initiatives and agendas; likely to be supported with short-term funding. Personally, they are often motivated by student wellbeing and development (Beetham *et al.* 2001, Browne and Beetham 2010). So these staff experience contradictory impulses: towards entrepreneurial ways of working institutionally, and towards holistic and person-centred ways of working at the interpersonal level.

Selwyn and Facer (2014 *ibid.*) have described a 'hyper-individualisation' of the learning experience mediated by digital technologies, which relies on the '*unconvincing assumption*' of lone, self-directed learners '*operating within an efficient technological network*'. A similar shift can be detected in the modularisation of teaching work and in the roles of professionals when they are enjoined to work as 'change agents', outside of (or even against?) departmental cultures, or to treat students as service users. Against these entrepreneurial values, academics such as Laura Czerniewicz (2103 & this symposium) have argued for teaching and student-facing work to be seen as essentially relational, drawing on qualities not of efficient service but of interest and care.

### **Technology as task and context**

As well as changing the global and institutional contexts, digital technologies now feature heavily in accounts of the lived experience of academic work.

*Some kind of digital capability is essential for virtually all posts.*

*You probably spend more than half your professional life in that online space.*

*I spend more time at work or at home in front of a PC than in any other activity.*

*Digital capability is not just changing how we work better... but changing the whole mindset of what it means to be working.*

The majority of tasks carried out in the course of teaching, learning, research, scholarship and public engagement are digitally mediated at some point. Central systems such as student records, payroll, the virtual learning environment, library catalogue and assessment software are in effect the gateways to institutional membership and status. They also record what work is done – by staff as well as students – and define to some extent how that work is valued. David Johnson, drawing on interviews with 42 US professors, found digital technology defining both the content and the contexts of academic work: '*Technological change threatens professional autonomy through exclusion from decision-making processes, increased workloads, and delimited teaching and research roles*' (Johnson 2013). The requirement to be constantly available via email and other online systems is a significant factor in the subjective

experience of stress among academic staff (Pignata *et al.* 2015). Importantly, these stressors do not apply equally to all employees or contexts. Technology is used for centralised oversight and performance management more extensively in 'teaching' universities (Temple *et. al.* 2013), and casual or 'new professional' staff are everywhere more likely to be female and from ethnic minorities than securely employed academic staff (AAUP 2014, Catalyst 2015, Chen & Lopes 2015, Corsa 2015, Lopes & Dewan 2015, NTEU 2015).

### **Parallels in graduate employment**

These changes to academic work have close parallels in the wider labour market. There is less job security, with many people experiencing multiple job and career changes, and with higher rates of casual, part-time, informal and self-employment (Strangleman 2007, Tomlinson 2012, UKCES 2014). The figures for young people in 'non-standard' work are over 50% in many European economies (Romei 2015) and almost as high in the US (Economist 2015). The UK Commission for Employment and Skills anticipates that:

*'as businesses shrink their workforces to a minimum using flexibly employed external service providers to cover shortfalls, a much smaller group of employees will be able to enjoy long-term contracts'.*

Technology is deeply implicated in both the capacity to employ 'service providers' on the flexible periphery of organisations, and in the kind of work that they will be doing. Frey and Osborne (2013) estimate that around 47 per cent of US jobs are vulnerable to being automated, and Deloitte (2014) arrive at a figure of around 36 per cent of UK jobs using a similar methodology. These are no longer only manual jobs but 'cognitive' jobs in the service and public sectors. Brown *et al.* describe 'digital Taylorism' - the potential to standardise and automate intellectual labour - rising inexorably '*up the value chain, reducing the anticipated demand for knowledge workers with high levels of workplace autonomy, discretion and opportunities for creative innovation*' (2015 p. 220). As a result, Coppola (2014) detects a 'bifurcation' of the middle class around high- and low-value cognitive labour, while Brown remarks that 'talent' rather than level of education is now used to define, segregate, and differentially reward the highest class of knowledge work.

For many of our students, graduation will be a gateway into what Guy Standing (2011) has called the *precariat*: a class of (mainly young) people who cannot find work that gives them the security, benefits, or professional and class identity that their education might lead them to expect. Like the open landscape of digital learning, open working arrangements offer flexibility and fluidity, which can be attractive to people with self-motivation and opportunity on their side. But there are costs. Even for those who can survive without a daily routine, healthcare, union rights, holiday and sickness pay or the support of colleagues, income from self-employment is falling (Friedman 2014, Gapper 2015) and will fall further as more workers are forced to sell their labour this way.

The compulsions of digital technology are all too easily elided with a general compulsion to (over)work (Gornall and Salisbury 2012). This compulsion now extends far beyond the kinds of work that bring professional status, economic security and identity rewards. Work time is fully interwoven with private time through digital devices that erase the boundaries. Corporations are modelling themselves on - or in some cases simply *becoming* - distributed

knowledge networks (Fiedler and Pata 2009), in which workers are expected to evolve their own projects, find their own motivations, and manage their own work flows. This makes the ideal digital worker look very much like the ideal academic. Consultants Deloitte (2015) characterise the most valuable workers in any business as the '*passionate explorers... internally motivated by their desire to quest, connect, and make an impact*' – though their passion does not exempt them from digital task lists or their motivation from being monitored by wearable digital devices (Rackspace 2014), contradictions that generate frustration and stress (Miller and Marsh 2014).

### **Discussion: 'Employability' and the radical curriculum**

The changes to the wider economy that I have discussed are important to academic work in several ways. First, the self-as-project in the workplace is driving the expansion of tertiary provision into work-based learning or closely work-related CPD. This contributes to the shifting of teaching practice in the tertiary sector towards flexible, remote and virtual approaches. Second, employment and the 'world of work' hang over every aspect of academic teaching as its rationale, telos, and ultimate measure of value. If the ways in which graduates find, keep and thrive in work are changing then the concept of 'employability' needs to be critically examined. And third, academic staff as 'passionate explorers' and knowledge workers may be in some ways exemplary of how work is changing, what new pressures are coming to bear, and what forms of resistance may be possible.

It is these last two points I want to conclude with. In 2012, reviewing the outcomes of a national digital capabilities project, we suggested that 'employability' should be understood against a background of radical change to the kinds of work that will be valued in the next decade (Littlejohn *et al.*, 2012). By 2015 interviewees were in no doubt that 'employability' was a contested term. Rather than being handed down into the curriculum as a set of requirements – often based on very partial evidence from graduate recruiters – the employability agenda could be opened up within the curriculum as a critical exploration of the digital turn, and an enquiry into how the resources of the subject area continue to be relevant. 'Employability' as a finite, teachable set of capabilities could be replaced with an ongoing enquiry into how different subject specialisms develop multi-faceted, resilient human beings who can thrive in a range of possible futures, including in '*jobs that do not yet exist*' (Temple 2013).

This conundrum is a far from theoretical one for academic staff. Digital technology is changing modes of intellectual production in ways that cannot fail to revolutionise academic life. To 'work' as an educator increasingly means to facilitate learners' engagements with various systems within which their identities, their knowledge and their capabilities are distributed. Unless academic work is understood as particular kinds of labour, under particular conditions of economic and intellectual production, academics risk failing to theorise and organise on our own behalf. In a world economy sustained by continuous upgrades, a staff development agenda based on mastery of the latest technology offers only a receding horizon of currency and competence. Instead, in my own work, I encourage staff to explore the role that networked digital technology plays in their fields of specialist knowledge and know-how (see e.g. Jaakkola 2015), to share these reflections and uncertainties with each other, and ultimately to explore them with their students.

Whether our work as educators moves in the direction of social justice and human wellbeing is not something we can fully determine as individuals. Our actions are constrained by political and economic - and nowadays by associated technical - systems. But those contexts change, sometimes in dramatic and discontinuous ways. There is nothing inevitable about how work will be organised ten or twenty years from now: that is for political and not technical development to determine. In the spirit of radical pedagogy, when we examine our own conditions of labour under late capitalism we can also open the door for students to reimagine the working futures that are waiting for them.

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