Transforming lives and 'the measure of their states'

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At the time of the Leitch Report (2006), the link between workforce skills and the UK's long-term economic productivity, in conditions of intensifying global competition, was the primary basis on which higher education was exhorted by government policy and emerging funding practice to redevelop its role as a mass-market purveyor of skills development opportunities. Universities were to be expected to attract significant investment from both individual and organisational demand markets. Demand-led and supply-led approaches to provision were compared to the latter's detriment (e.g. Leitch, 2006:71), and funding for supply was to be directed towards institutions that met demand for 'valued' qualifications (DIUS 2007:36). The focus on workforce skills development (Leitch, 2006; King, 2007) was deemed challenging by the UK HE sector (THES, 2007), while it remained relatively confident that it had already successfully addressed the individual demand market through the employability agenda (UUK, 2006) and a proliferation of sector-specific programme offerings.

Less than a decade later, economic and political change and uncertainty have allowed the question to be asked of potential students now bearing the risk associated with investment in higher education – *is there a better career investment for you?* The only question now addressed to UK universities is that of their effectiveness in managing demand at sustainable levels in a higher education market in which demand, supply and price are carefully controlled. A pessimistic interpretation of current political and funding changes would view them as an early stage within a determined attempt to reshape higher education in the UK. We see supply expanded through the liberalisation of taught-degree awarding powers, price controlled, and demand constrained by a combination of number caps and immigration policy. While these changes combine to raise the sustainability bar for individual institutions, their ability to compete may later be simultaneously constrained by the gradual re-imposition of regressive participation norms expressed as specified entry grades. These may be decreased over time to a future point somewhere above the current minimum entry requirements representing a participation level identified as non-problematic and therefore outside the cap required to prevent over-investment by society and by individuals in higher education.

A significant focus for arguments for and against target participation rates and the value of higher education is the 'graduate job' as a primary measure of value for that investment (Guardian, 2008; Telegraph, 2012). Not that any simple correlation between graduation and graduate employment has been the norm in recent times. Even in the 1970s, when the under-21 participation in the 1970s was around 15 per cent, the idea that all graduates obtained highly paid and intellectually demanding work from the outset, is misleading, despite this recollection:

> When I left university in the 1970s I took it for granted that I would get a job… Having a degree virtually guaranteed a job and it didn't much matter what the degree was in. It could be in Old Norse, and it often was. Graduates could leave university with a degree in Old Norse and employers would snap them up. 'You can speak the Viking?' they would say. 'Come and run our factory. Your mind is honed to a fine edge.'
>
> (Robinson, 2001:48)

In fact, graduate training schemes often required a period of shopfloor experience before any fast-tracking, and not all graduates got those opportunities. What has happened since then is that graduates are now expected to build their own careers, their own CVs, by creating for themselves a route through work experience that they then construct into a case for career advancement. Viewed in this way, what we are seeing is no more than the predicted change to career patterns – the move to portfolio work patterns and the greater role of the individual in shaping and maintaining their own career (Edwards 1997:22-42), whether through an inevitable and rational response by firms to knowledge flows (Burton Jones, 1999) or the outcome of short-termist government approaches to competition (Castells, 2000: 255). The system of graduate trainee schemes is now effectively under new management – that of graduates themselves. And this creates a new and vital task for universities in their scoping of what employability is — providing their graduates with the knowledge and the tools not only to get their first job or jobs, but to understand how some time later to make a step change in their expectations and their claims to graduate identity (Holmes, 2013), on the basis of their own independently managed post-graduation trainee scheme.

They do so in a labour market that is optimistic in its demand predictions for graduates. The Institute of Directors (2010) notes that almost half of its jobs require degree level skills and expects that over the next three to five years the demand for STEM skills, for higher level skills at degree level, and for leadership and management skills, will further increase. The Confederation of British Industry (2013) puts the current graduate proportion at one in three, with an expectation of an 8 per cent rise in graduate recruitment levels. But as the absolute numbers of graduates increase within a challenging economic context, and their employment as measured six months after graduation remains at over 90% across the sector, neither current nor projected demand levels vouch for the quality of that employment. Additionally, as students' financial priorities on graduation encourage a pragmatic approach to immediate debt-reducing employment, the

continued employment success of graduates itself fuels the argument that not only are a significant proportion of graduates over-qualified and/or under-employed, but also that they are displacing less qualified workers who could perform equally well in roles now taken by graduates.

Here too we are, it seems, far from the optimistic mid-2000s argument that transition to a service economy, driven and facilitated by technological advance, would create new areas of added value in a global economy in which 'there are not a fixed number of jobs' (Leitch, 2006:33), or that skills supply is capable of expanding skills demand, so that 'today's generation can potentially benefit from an even more fundamental change towards a more skilled, less unskilled economy that will once again create new room at the top' (Milburn, 2007). The structural change associated with the development of a knowledge economy has slowed down in recent years (Wilson *et al*., 2006). In one interpretation, the growth is in what can only rather generally be referred to as 'knowledge work' insofar as it relies on mental rather than physical effort, and demands not the creative understanding of business models and processes, or the innovative leveraging of technical and tacit knowledge to improve product and/or process, but high levels of aesthetic and emotional labour required in large parts of the interactive service sector within a quest for continual tactical advantage (Thompson *et al.*, 2001). The competitive differentiation of offerings resides in consistent enthusiasm, patience and delivery, not in a group of experts or innovators (Dixon 2000:148-160) or even within a community of informed technical practice where solutions are pondered, shared and elaborated (Brown & Duguid, 2000, 91-115). Service customisation, as a feature of traditionally classified services and an expanding element of 'product', is occurring largely with the assistance of technologies that constrain rather than expand the opportunities for individual discretion (Thompson *et al.*, 2001). Straightforward scripted decisions are routinised and made at speed, and more challenging ones transferred upwards, all managed by IT systems (*ibid*.), increasing the intensity of work while reducing individual discretion and responsibility (Green, 2006).

In this interpretation, innovations are largely those that secure service quality, defined as delivery to specification, and to a more superficially customised specification, rather than involving an increase in the knowledge-based specification of the service itself (Keep & Mayhew, 1999). But this interpretation has in common with some of the arguments about what does and should constitute graduate employment that it recognises change in one dimension of a phenomenon while neglecting to recognise the full range of dimensions on which change is occurring. It assumes, consistent with Milburn's assumption of an abiding 'top', that fundamental structures and hierarchies remain in place while all around them changes, like Shakespeare's exiled Duke in *As You Like It* (Act 5, Scene 4), who in the throes of celebrating the transformation of fortunes accomplished through social upheaval in the forest of Arden, reverts to the standard social order in offering those who have

> Endur'd shrewd days and nights with us
> …the good of our returned fortune,
> According to the measure of their states.

And yet as the pace of economic activity increases and the reach of competition extends, organisations thrive and survive on the basis of improvements that may be incremental and short-term as well as deep and lasting change to products, services and processes. This spreads the responsibility for innovation – major and minor- across an organisation and way beyond a traditional structured product design process and the sole ownership of a small group of 'symbolic analysts' as envisaged by Reich (2001). Every indication we have about the sources and processes of innovation supports the view that it is no longer confined to a 'top' — individuals or organisations. It is a more open, less formal, less structured activity altogether. In 2006, NESTA reported on what it called 'the innovation gap' – the gap between what, in traditional science-based pipeline models we recognise as innovation and the larger category of hidden innovation that occurs across sectors and structures in a more diverse and textured pattern of innovation that is now:

> …a multi-directional and iterative process that involves multiple actors. It encompasses not only new components and products but new services, technical standards, business models and processes. It is a feature of developments in the public and non-profit sectors as much as in the private sector. Furthermore, much of the economic benefit from innovation comes from the diffusion of knowledge and technology, resulting in many incremental innovations.
>
> (NESTA, 2006)

This is the world in which our graduates work – one in which the entire structure of role expectations within an organisation has changed, along with the nature and the speed of change and innovation (Barnett, 2000). There is simply no point in holding it up against a picture of a different age – of a structure and an innovation pace associated with the 1970s — finding it does not fit, and regretting it is so. Changing patterns of graduate employment form part of a whole set of changes – economic, social, demographic and cultural – that have transformed the lives of students while they are with us and graduates when they leave us. That's the world for which our curriculum and their experience of it have to prepare them.

Actually, of course, whichever argument you take – that the capacity for innovation is shrinking, or that it's what you do when in the job that counts – the practical implications for a university that seeks to widen

opportunity through participation in higher education are much the same. In either scenario, as a university that has as its mission the progression of social justice by extending the social and economic benefits of access to higher education and the career prospects it opens up, we would have to question our contribution if we became complicit in the denial of that opportunity by simply and straightforwardly preparing our graduates to occupy more or less the same relative position, within a changed economy, as they might previously have done as non-graduates. We'd be keeping up, but no more than that. Adding value is good and worthwhile, but it's not enough if it is not sufficient to improve social mobility through expanded economic opportunity within the prevailing economic context, however interpreted. For the access we offer to be meaningful, it must not only extend beyond entry to higher education to meaningful opportunity to succeed within it, as widely recognized in the retention literature (e.g. Yorke & Thomas, 2003), but also deliver on subsequent opportunity, whether that is envisaged within an employment hierarchy whose dividing lines have been recalibrated and moved upwards without broader structural change in the labour market, or as a less structured labour market of expanded creative opportunity for those with the independent capability to construct graduate identity and create individual prospects within it. Either way, our graduates must be positioned to compete for social and economic advantage and, if social justice is to be lasting and ubiquitous, to deliver it for others. To do this we have to look beyond immediate employment prospects and enable our graduates to do likewise, by providing them with the intellectual tools and the self-belief in their own graduate identities that will support their consistent claims on the most advantageous opportunities that those identities can secure.

In this context, the importance of disposition and aptitude alongside knowledge and skill is now a well-established feature of higher education's claims regarding its own value and its graduates' achievements. Recognition that 'academic qualifications are no longer enough' (Robinson, 1999) generated what is now a well-established focus on supplementary transferable and generic skills:

> We believe that four skills are key to the future success of graduates whatever they intend to do in later life. These four are: communication skills, numeracy, the use of information technology and learning how to learn.
>
> (Dearing, 1997)

> For graduate recruiters a degree alone is not enough… 82 percent of employers surveyed rated employability skills as the highest graduate recruitment factor. Self-management, teamwork, problem solving, communication skills, application of IT, application of numeracy all featured consistently in employer needs.
>
> (Wilson, 2012)

While the Leitch Report took a starkly instrumental and economically naive approach to 'ensuring that only those qualifications approved by employers attract public funding… with fewer qualifications overall and only qualifications delivering economically valuable skills, attracting a return in the labour market' (Leitch 2006), universities have themselves taken a more progressive approach to shaping notions of graduate identity informed by durable and generative ways of acting and thinking that define university graduates by virtue both of their achievement and of the character of the learning experience of university education. Where generic skills had earlier offered a behavioural supplement to academic knowledge, graduate attributes have emerged more recently as complex constellations of aptitude and propensity that reflect what the United Nations Conference for Trade and Development describes as 'a shift from a traditional emphasis in many education systems on evaluating the ideas of others to generating ideas oneself (cited in QAA, 2012). If attributes are to be differentiated meaningfully and usefully from skills and outcomes, they have to represent and achieve something different, and to interact with skills and knowledge in a way that changes them. This isn't uniformly achieved. The oft-quoted example of the University of Sydney offers skill composites that do not readily, either individually or through integration, constitute the broader attributes claimed, and the transformative capacity of those attributes is itself limited (sydney.edu.au/careers/ applying_jobs/what_employers_want/graduate_attributes.shtml). Where they work better and have the greatest capacity to inform the student experience comprehensively and transform graduate outcomes, graduate attributes offer a limited set of defining characteristics that speak of the quality of graduate capability and the pedagogic and broader institutional ethos in which students learn and develop (www.abertay.ac.uk/ media/Strategic%20Plan% 202011-15.pdf).

To define the ways in which graduates behave and act, attributes have to be embedded in practice, emerging from the way we learn and develop practice, representing more than overarching composites of skill and outcome, generated through pedagogic context and integral to the learning process. The context and processes of learning in higher education appear to lend themselves well to this challenge, particularly in the proximity and potential for integration between the academic activities of teaching and research, with the latter term traditional but defined broadly to include the outputs of enterprise. Described in Humboldt's 19th century depiction of the then-new University of Berlin as 'a peculiarity of the institutions of higher learning that they treat higher learning always in terms of not yet completely solved problems remaining at all times in a research mode' (Elton 2001, 45), the 'research-teaching nexus' (e.g. Clark 1997) is currently linked with a range of overlapping student-centred pedagogies such as enquiry-based learning, problem-based learning, notions of student co-production of knowledge and learner

engagement in the practice and disciplinary practices of research. It has to be remembered that research and policy debate around this nexus is in part a higher education defence against expansion, new zones of competition and the development of new sector hierarchies (Malcolm, 2013). In part for this reason, attention has shifted since around the year 2000 from questions of policy and principle – *should there be a link? And what should it be?* — to an enhancement-based approach that seeks to identify and support the many ways in which a link between research and teaching can be evidenced. National funded projects alongside relatively small-scale and specific searches for exemplary practice have helped matrices that are methodologically rather over-dignified with the label 'model'. And we do not yet have satisfactory answers to the questions raised decades earlier as to whether a research-teaching link is comprehensively core and causal to the idea of higher education.

If there is a definitive claim available for the distinctive and essential value of higher education to its students, graduates and employers, and to the communities and economies they inhabit, it must surely lie within the consistent impact on learning and practice of the research-teaching link. If there is a durable and pervasive quality to graduate outcomes that will allow our graduates to demonstrate not only immediate post-graduation impact (Atkins, 1999) but also longer-term and more developed claims to graduate identity and the social and economic opportunity it facilitates, and if those opportunities are to be used by them to generate broader and more equitably distributed social and economic benefits for whole communities, their ability and willingness to imagine and effect innovation for positive change – incremental as well as radical – will surely be a significant driver. A coherent research-teaching link must therefore engage students continuously in creative enquiry rather than engaging them sporadically and eventually in the practice of rigid disciplinary method like the Myop in Shaw's *The Adventures of the Black Girl in her Search for God* (1932), who says of the concept of conditioned reflex:

> The fact was known of course to every child; but it had never been proved experimentally in the laboratory; and therefore it was not scientifically known at all. It reached me as a skilled conjecture; I handed it on as science.

Constructing pervasive pedagogies and contexts that challenge and support students to develop not only their capability but also their propensity to re-imagine, to define and to rework their own expectations, those of their future employers and those of the communities with which they will interact, through a pedagogy that consistently models and practices that willingness and ability to imagine, to evaluate, to design, plan and to drive change, will be key to our achievement in transforming our graduates' lives, by transforming their own and others' conceptions of their entitlement.

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Information and Communication Technologies as means for self-improvement at remote universities: the example of Urgench State University, Uzbekistan

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Abstract

This paper describes the research conducted at the Information Resource Center of Urgench State University, located in the Khorezm region of Uzbekistan, on the possibilities and challenges the students and lecturers face in their pursuit for self-improvement and self-education. The article discloses new qualitative approaches and IT methods in the teaching and educational processes in higher education of Central Asian countries in transition, the overall aim of which is to close the gap and shape the spiritual values of the young generation in the globalizing world.

The framework conditions for this have been set by the Government of Uzbekistan through particular Decrees, aiming at the creation of e-education at universities and institutions throughout the country and specifically in the remote regions as to improve the access to regularly updated information, to motivate the use of IT in classes as well as to enhance the responsibility of the information services of universities for assuring the quality of research and teaching (pedagogical) activities of the lecturers.

The research showed that the Internet can function *inter alia* as a controlling device when education is delivered through the web. Collection, analysis and preparation of educational-methodological materials on specific subjects and extracurricular activities require specific knowledge on IT and information literacy both in the teaching staff and the students.

Keywords: Central Asian countries, remote regions, electronic resources, information literacy, self-improvement, globalization, information network, information resources center.

Introduction

There is much being done in Central Asian countries, and in Uzbekistan in particular, to facilitate the dissemination of IT technologies and to raise the IT competency of the population. In this regard, on February 23rd, 2011, a Resolution of the President of the Republic of Uzbekistan on the measures for further development of the quality of libraries and information resource services, based on information and communication technologies for the period of 2011-2015, was adopted. This Resolution set the framework for formulating the typical regulations of electronic libraries. For each information resource center (IRC) of higher educational institutions (HEIs) of the Republic, a programme has been approved for the creation of: (1) an electronic collection of full-text informational-library resources; (2) an electronic catalogue; (3) a database of electronic textbooks, journals; and (4) a database of electronic information resources of the world's scientific and academic publishing houses.

Concurrently a Decree of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan from May 20th, 2011 has been issued, according to which all higher educational institutions in the country need to enhance the responsibility of teachers in creation of high-quality training materials in electronic format in order to support the e-education processes throughout the country.

The Law of the Republic of Uzbekistan on 'Informatization' adopted on December 11th, 2003, is the main instrument to support information literacy at the government level. Article 3 of this Law allows: (1) the creation of a unified information space and the grounds for the Republic to join the world information