Digital exposure

Technology has changed the way we live. ACCA's Helen Perkins takes a look at how it will change how accountants are made

It is clear that society is being transformed by technological developments – perhaps nowhere more so than through an increasingly rich and pervasive online world – which is becoming as prevalent as the physical one we inhabit.

Within the last decade, we have begun to see the true power of the internet. Not only does it transmit knowledge and information, but it can also bring people with common interests together across geographical boundaries, through social networking sites. The rapid engagement with these sites has been one of the major transformational trends of recent years.

It's an oft-cited statistic that if Facebook – launched in 2004 – were a country, its 750 million inhabitants would make it the third most populous in the world, behind only China and India. In the corporate space, LinkedIn – the professional networking site created in 2003 – now has 120 million registered professionals and more than two million companies have LinkedIn company pages. These are not just places to 'meet' and exchange ideas – they are also effecting

major change in the physical world, not least in shaping the sociopolitical landscape. In February 2011, an Egyptian baby was named Facebook to commemorate the role social media played in the Arab Spring uprisings.

There is also now widespread use of immersive technologies. The rise of gaming devices (the Nintendo Wii had sold 87.5 million units worldwide as at the end of June 2011), and virtual environments like Second Life, mean that increasing numbers of people are used to interacting through digital representations of themselves. Gartner predicts that by 2013, the majority of under-18s entering tertiary education will have an avatar.

DIGITAL WORKFORCE

As a result, we are seeing a new global generation of technology-enabled workers.

In its recent report *The Rise of Generation C: Implications for the World of 2020*, global management consulting firm Booz & Company states that, by 2020, an entire generation will have grown up in a primarily digital world. The first to be born into and brought up in this digital age, they see computers, the internet, mobile phones, PDAs, texting, tweeting and social networking as part and parcel of their daily lives. In many economies, a technology-enabled world is the only one they have ever experienced. Booz terms this Generation C – 'connected, communicating, content-centric, computerised, community-oriented, always clicking'.

What influence will this generation have on how becoming and remaining a professional will be viewed in the future?

First, employers are responding by seeking to reflect the preferences of current and future hires in order to remain relevant and attractive. 'The generation of recruits joining us now are digital natives – they've been brought up with the latest technology,' Richard Pollard, global development leader at PwC, told ACCA's Research and Insights Conference 2011 recently. 'They have multiple mobile devices on joining the firm and use many different applications and technologies. For people coming into our business now, it wouldn't be credible to say, "You can't use that technology." We have to adapt and anticipate what they will be using.'

Similarly, learning providers are also changing how they work to respond to these evolving needs.

'One driver for us using e-learning now is a demand from customers that we put as much online as possible,' explained Martin Taylor, CEO of BPP Business School, also speaking at the conference.

Helen Perkins has over 20 years' experience in the accountancy education and training sector having worked for Coopers & Lybrand, Accountancy Tutors and in various roles for ACCA in the UK and North America. She is now leading ACCA's new stream of research and insights work on the e-professional.

For both employers and educators, there is also an imperative to help connect an international network of aspiring and existing professionals. As the globalisation of business continues, more companies are made up of highly dispersed workforces, including growing numbers of remote workers. The ability to connect these groups of learners through virtual classrooms and enable them to collaborate is highly valuable, due to the rich exchange of ideas and experiences.

Technology allows organisations to cater for and connect this raft of talent in a consistent way – while also affording many more opportunities for moulding learning to individual needs.

One of the past criticisms of online learning has been that is does not provide a sufficiently tailored experience for the learner. But now, technological advances are arguably providing opportunities for much greater personalisation than other means of learning.

The range of data that can be analysed via the internet enables learning providers to build a detailed picture of a learner's strengths and weaknesses, their knowledge gaps and learning styles, allowing them to build bespoke learning plans and outcomes.

'As a result, we could start to put together people with similar learning needs and at similar points in their learning journeys together as a group. That would mean you can get much more focus,' explained Taylor.

EVOLUTION OF LEARNING

Within the professions – where acquiring high-level skills and knowledge is an integral part of development – what technological developments mean for how education and training can be merged is also being exploited. The type of training traditionally experienced by professionals effectively compartmentalises assessment (normally by means of a written examination), learning (face-to-face course) and practical experience (work) into discrete areas.

But, with the increasing use of virtual learning environments (VLEs), the worlds of learning and assessment can be brought closer together. The obvious benefit of this is that what and how people learn can be more closely replicated in an assessment situation. What is particularly powerful for professional bodies is the opportunity technology provides to blur the artificial divide between learning, assessment and the practical application of the skills and knowledge gained in the workplace.

Online methods offer the capacity to 'blend' forms of learning and assessment in a way

that is much more efficient and effective. This can provide an experience so close to that of the real world that it is effectively moving beyond simulation to what is termed 'emulation' – an experience which mimics the real-world challenges that professionals face. It is this synthesis that many professions are already embracing.

Simulations have long been used in education and training, through role plays and interviews.

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The first computer-aided flight simulators were developed in the 1960s and are a well-established means of training both military and commercial pilots. With developments in VLEs, simulations/emulations are now coming of age in a range of professions.

For example, computer-based simulations are used as part of the US Medical Licensing Examination, designed to test trainee doctors' ability to treat patients in a practical setting. Candidates are presented with authentic problems and treat a simulated patient on screen. They receive information, conduct examinations, order tests and treatments, to which the electronic patient will respond. A candidate's performance is assessed against model responses using a regression-based, automatic scoring procedure.

HEALTHY OPTIONS
The School of Pharmacy at Keele University uses a similar methodology for its students. Traditionally, pharmacy students were assessed on their diagnostic and prescription skills by role plays with tutors and actors, posing as patients. Today, pharmacy students are presented with a series of scenarios on screen and they interact with a number of virtual patients through free text questions, interrogating the patient to reach a diagnosis and suggest treatment. The virtual patients can be accessed on laptops and mobile devices, so learning can be done anywhere.

But is technology-enabled learning and assessment a concept that can really take off globally, and be replicated in a variety of environments, given the current inequalities in IT infrastructures that exist around the world? Many point to the adoption of mobile technologies – leapfrogging fixed line means of connection – as a likely solution. A recent McKinsey report, *Can India Lead the Mobile-*

Internet Revolution?, suggests that India could become the first mobile digital society. The report points out that, although just 7% of the population has access to the web, users in India consume an average of 4.5 hours of digital content, offline per day. If the demand for this content could be harnessed through the mobile internet, McKinsey forecasts that the number of consumers could reach 450 million by 2015 and lead the way for widespread mobile internet adoption by developing markets. Looking globally, Cisco predicts that – by 2015 – the majority of those accessing the internet will do so through mobile devices.

DIGITAL CONSUMERS
The online world has given people a new way of consuming information and accessing services – one which is immediate, constantly available and increasingly personalised and immersive. It is building an expectation that we can get everything – including the skills we need to compete in the employment market – when and how we want. There will be an inevitable shift towards more sophisticated and customised learning and development interventions to meet these demands.

From the point of view of professional bodies, the growing sophistication in assessment methodology has significant quality advantages. Technology has the capability to provide more roundly and robustly assessed professionals, with the real-world skills employers value.

At the same time, entrepreneurship is being fuelled by digital advances, with barriers to entry in the business world fast disappearing. There is no longer a need for physical infrastructure to start a business – practically any good product or service idea can be rapidly taken to market, through a web of online partners and suppliers.

All this poses a real challenge to the concept of what it means to become and remain a professional in the digital age. It's a challenge to which the accountancy profession needs to rise to – if it is to keep pace with developments in other professions and appeal to the coming generation of worker. For its part, ACCA will be moving into a new technological space to meet the needs of employers for work-ready professional accountants, while maintaining the high reputation of the ACCA brand.

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