Innovating a new future for learning: Finding our path

Valerie Hannon

Innovation Unit, UK

Ms. Valerie Hannon is a Board Director of the Innovation Unit (England, UK) and independent consultant. She specialises in innovation policy and practice; supporting strategic thinking within organisations and policy agencies; leadership development and capacity building; and in creativity and culture in learning.

Ms Hannon began her career as a secondary school teacher in London, and has subsequently been a senior researcher (University of Sheffield) and a Director of Education (Derbyshire, UK). She was a founding director of the Innovation Unit when it was initially established within the UK's Department of Education, and subsequently became its first Managing Partner when it became independent.

Ms Hannon has designed and developed next practice programs for systems, schools and districts. She has been consultant in support of change programs in numerous systems, including in Brisbane, Victoria (Australia), British Columbia, Northern Ireland and in Europe; and is regularly engaged as consultant adviser by overseas strategic agencies (the Canadian Education Association, ANZSOG, The Asian Education Foundation, Centre for Strategic Education, Melbourne). As consultant adviser to the Department for Culture and Media in England, Ms Hannon was instrumental in setting up the *Creative Partnerships* program, the first in the world to systematise the engagement of the creative sector with schools to improve learning. She has developed programs on futures thinking for education practitioners, including *FutureSight* for the National College for School Leadership. She was also consultant adviser to the Department of Education and Skills (now DCSF) on creative and cultural learning, following her membership of the National Advisory Committee on Creative and Cultural Education, which produced the seminal report *All Our Futures* (1999). Ms Hannon is a founder faculty member of the Global Education Leaders Program, within which she is consultant adviser to the system leaders of the Finnish jurisdictions and to the Chief Officers of seven States in the United States of America. She is senior consultant for the OECD on the *Schooling for Tomorrow* and *Innovative Learning Environments* projects. She is also a speaker at, and advisor to, the World Innovation Summit on Education (WISE) now held annually in Qatar. Ms Hannon is a regular keynote speaker and facilitator at international conferences and workshops.

Abstract

This paper, in conjunction with the associated presentation, makes the case that the pursuit of 'school improvement' is insufficient to address the challenges facing us if the world is to make available equitable, effective learning systems for all its citizens. A set of drivers of change are explored. It is argued that a 'split screen' approach is needed by system leaders and policy makers in which, while school improvement must continue to be pursued, simultaneously a 'learning ecosystem' should be created. Such a mutually supportive system would engage a much wider range of partners and players, and would locate learning in a new variety of spaces and places. The conditions needed to create such a system are suggested from the evidence of highly innovative sectors.

'Schooling' in the C21st: Pressures and opportunities to change

The argument that education needs to change to adapt to the learning needs of a future that remains uncertain has been exhaustively rehearsed. Although there is considerable debate about the extent and urgency of the problem and the kinds of changes to pedagogy, curriculum and assessment required, there is nevertheless a growing consensus that conventional education systems are, on current trajectories, unlikely to be capable of the kind of step change that is urgently needed.

At the heart of this debate is the role of schools. Schools are the dominant vehicle for organising learning across the world, and have been resilient. However, the challenge to the existing model for schooling is very real. In the developing world, some innovators in education are questioning the very idea of schools as the right (or the exclusive) solution to the challenge of educating their young people. In richer countries widespread disengagement by young people with schooling (other than for entirely instrumental purposes) is the presenting challenge.

The argument of this paper is that school improvement is not enough. It is necessary, but not sufficient.

Five drivers are converging to force a change of shape on schooling:

Digital technology

As long ago as 2000, it was estimated that the amount of knowledge in the world doubled during the previous decade and at that time was said to be doubling every 18 months.[1]

Changing even faster is the ease of access to information from any device with an internet connection. Until very recently, that meant a computer in a fixed location or at best a laptop. Now it might be a smart phone or a tablet. Internet-connected devices are expected to become ubiquitous to the point of invisibility over the next decade.[2]

Communication and connection are changing too. The world's most popular social networking site, Facebook, has over 500 million active users worldwide,[3] and 43 per cent of 9–12 –year-olds in the UK have a profile on a social networking site.[4] For many young people email is over. Hence: the increased volume of knowledge; the ease of access to it; and transformed communication, collaboration and connectivity together present powerful forces challenging the schooling paradigm.

Global economic recession

Before the 2008 financial crisis, the world could be divided into two broad categories: 'developed' nations, which could afford to invest heavily in education, and 'developing' nations, which could not.

Today, most education budgets are contracting across the developed world; governments face the challenge of 'improving' education systems built for the 19th and 20th centuries, while cutting spending. Meanwhile, most developing countries have no possibility of the kind of investment in public services historically enjoyed by the developed world.

Globalisation

Chinese-American educationist Yong Zhao writes that 'as a social institution, education has been mostly a local entity […] serving the purpose of the local community or the nation, preparing workers for the local economy, and passing on local values.'[5]

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[1] D. Wetmore, 'Time's a wastin' *Training and Development Magazine* (ASTD), September 2000, p. 67

[2] Oliver Burkeman, 'The Internet is over' *Guardian* 15 March 2011

[3] From Facebook website (https://www.facebook.com/)

[4] Sonia Livingstone, 'Social Networking, Age and Privacy' EU Kids Online 2011

[5] Yong Zhao, Catching Up or Leading the Way? ACSD 2002.

Today, however, our local communities and local economies are globally connected. Of particular concern for policy makers has been the fact that jobs have also become globalised and can be quickly transferred from one side of the world to another, sometimes with the job-holders travelling with them, but more often leaving someone jobless, replaced by someone better qualified and cheaper to employ.

Meanwhile, education itself is globalising: millions of students are studying outside their home countries, while open courseware, pioneered by MIT, makes virtual globalisation a common experience. Students need to develop 'global competence', and schools have wider goals – and competitors.

Demographics

In Europe, Japan and North America, the working age population is projected to shrink by almost 50 million by 2016, while the number of over-65s is projected to increase by almost 67 million.[6] People will need to work longer, meaning that they will need to continue to learn new skills throughout their lives. Lifelong learning must be a habit and a reality.

Developing countries, on the other hand, are experiencing rapid population growth which, along with urbanisation and economic and technological advancement, is serving to increase significantly the demand for education. Low (or no) standards of education for the generation before mean that often there are insufficient qualified teachers to meet this need. In regions ravaged by AIDS or war the problem is especially acute. The western models of schooling will never serve to meet this huge demand.

Environmental instability

In 2009, the UK's Chief Government Adviser on Science, John Beddington, warned that the world was facing a 'perfect storm' brought on by the combination of climate change, energy shortages, food shortages and water depletion.[7] Insurance company Munich Re reported that 2010 saw unprecedented damage from natural disasters, while NASA found that 2010 and 2005 were the hottest years since records began in 1880.[8]

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[6] Konstantinos Giannakouris, 'Ageing characterises the demographic perspectives of the European societies', *Eurostat* 2008.

[7] Quoted in Jonathon Porritt, 'Perfect storm of environmental and economic collapse closer than you think', *Guardian*, 23 March 2009.

[8] Munich Re (http://www.scientificamerican.com/article.cfm?id=insurance-ranks-2010-worst-for-climate-disasters); NASA (http://www.nasa.gov/topics/earth/features/2010-warmest-year.html)

In 2008, the world tipped from predominantly rural to predominantly urban: most of the world now lives in cities – 3.3 billion according to the UN Population Fund, set to rise to 5 billion by 2020,[9] by which point China intends to have built 400 new cities.[10]

For the most part governments have been slow to reflect these global pressures in their broad approach to education. However, some innovators are putting sustainability and learners' relationship with their environments – whatever they may be – at the heart of the learning process. Arguably, developing eco-literacy is as urgent a task as the acquisition of other traditional literacies.

How can system leaders respond?

The argument of this paper is by no means that 'school is dead' or defunct or redundant. We have to move from where we are now – and find a sensible path by which to do it. What is needed is a 'split screen' approach; that is, system leaders must – indeed have a moral responsibility to – pursue the most effective school improvement techniques available. However, simultaneously they need to create the conditions in which a flourishing ecosystem of innovation can occur.

One way to think about this is through conceptualising such a system through the following grid or heuristic:

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[9] 'State of the World Population 2007: Unleashing the Potential of Urban Growth' UN Population Fund 2007.

[10] Neville Mars & Adrian Hornsby, *The Chinese Dream: A Society Under Construction* 010 Publishers, 2008.
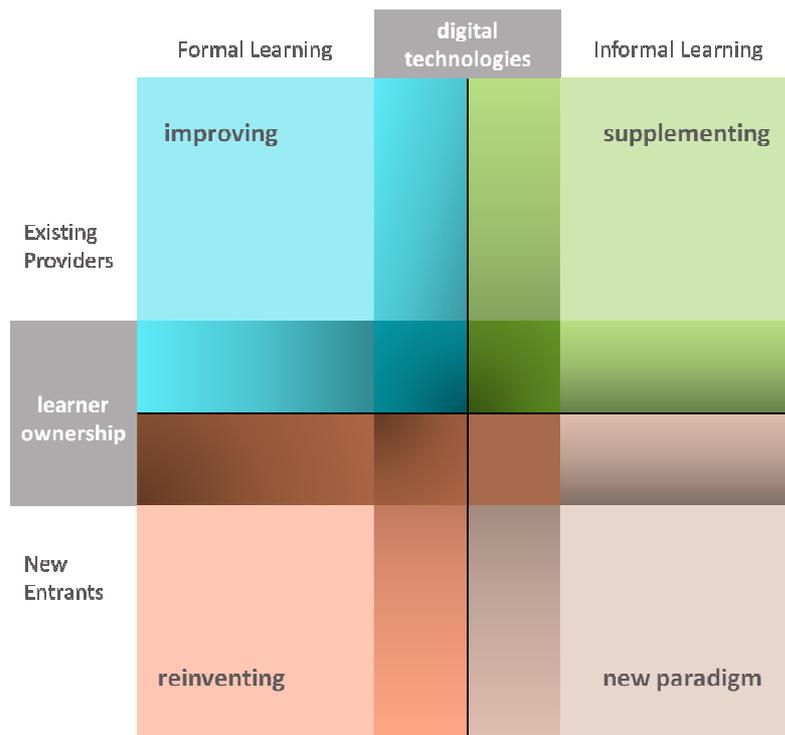
This model was evolved through reference to research and then developed and tested, through an inductive process using around 50 examples of innovative practice in education drawn from a global field, and with groups of system leaders in countries around the world.[11]

It proposes that *learning spaces* may be thought of as either formal or informal (vertical columns); and learning providers are comprised of existing providers and new entrants – this latter category to incorporate the kinds of new partnerships/alliances of which schools themselves can be a part.

Plotting numerous examples of learning environments of the grid suggested the descriptors assigned to them. Existing providers working within the formal (schooling) space are engaged in school improvement (challenging, difficult and essential). However, the paradigmatic changes are more likely to be found where new providers, alliances or entrepreneurs engage also in the informal learning space. And finally, on the basis of emergent research and critique, the hypothesis is that learning in *all the quadrants* is made more engaging when combined with powerful digital technologies and learner ownership.

The point however, is not to drive *all* activity towards the 4th lower right quadrant. Rather, it is suggested that acknowledging the balance that systems must strike between the short-term priorities to improve today's schools for today's children with more radical shifts,

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[11] The model and associated materials were co-developed and tested with groups of system leaders from England, Australia, New Zealand, China, South Korea and Finland.

a thriving ecosystem of innovation would see an appropriate mix of activity across all four quadrants.

The question then becomes: how do system leaders hoping to develop an innovation ecosystem get from where they are now to where they want to be? What are the conditions they need to create for an ecosystem like this to grow and flourish?

Platform thinking: how to encourage an innovation ecosystem

All this fresh research and thinking about the nature of innovation points us in a new direction in relation to education; that is, that creating the conditions for a *flourishing ecosystem* of innovation should be our objective if organised learning is to adapt adequately to the pressures and opportunities for change.

How do flourishing ecosystems arise and sustain themselves in the natural world? One route is through **platform creation**. An excellent example is that of the coral reef. Darwin's exploration of this phenomenon revealed that the physical platform created by the skeletons of millions of soft polyps created a habitat within which literally millions of other species could co-exist and flourish. While within it there is competition for resources, nevertheless species also collaborate, with mutually supportive outcomes.[12]

This biological ecosystem, sustained by the platform of the coral reef, is mirrored repeatedly in the world of digital technology. The internet itself is a platform; while it makes commerce possible, it remains itself outside it. And it supports many other ('stacked') platforms. It could be said that the history of the computer industry is characterised by a series of defining innovations that created platforms for participation by a wide range of companies and players.

The most obvious of these is iTunes as a platform for the iPhone and the iPad. Apple did not seek to monopolise the creation of apps for these devices, but created a suite of initial model apps, showing their power and demonstrating what could be done. They primed the pump. Now tens of thousands of apps populate the system, created by a multitude of providers, and powered by consumer demand.

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[12] Charles Darwin, *The structure and distribution of coral reefs*, 1842

Towards a learning ecosystem

Jurisdictions across the world with responsibility for the provision of education systems have recognised that their role needs to evolve. The conclusions set out in reports such as the 2010 McKinsey Report[13] are therefore seized upon. They concentrate on the improvement techniques deployed by the 'most successful systems' over the last ten years. However, they do not address what is needed for the coming twenty or thirty. Extrapolating from the conditions which give rise to examples of dynamic improvement *and* transformation, some implications are apparent – and these accord with the learning which has emerged from the exploration of platform development.

Perhaps some of these lessons can be applied more broadly to how the state fulfils its responsibility to organise for the education of citizens in a manner appropriate to the new century. The 'planks in the platform' are likely to include, amongst others:

• an inspiring vision for lifelong and engaged learning, with aims beyond personal wealth and economic competitiveness
• low barriers of entry for new providers
• freedom for merger and demerger activity
• incentivising student-led curriculum development
• greater transparency for learners about the range of opportunities available
• coalition building
• investment in, and encouragement for, disciplined 'innovation zones'.

There can be no prescription here: the evidence is insufficiently strong. Such is the nature of innovation. But the benefits of these approaches can be seen in other fields and sectors; and 'fortune favours the connected mind'. New players and partners are beginning to enter this space with unprecedented energy. These include: social enterprises; businesses; creative and cultural organisations; user groups; philanthropists; further and higher education organisations and NGOs.

In the case of education, which is such a critical portal to full entry into the life of a society – and a prerequisite for democracy – governments must not and cannot abrogate certain responsibilities critical to their broader democratic and social goals. Amongst these are issues of equity and social mobility. For this reason the aim must be to enable policy makers to adopt an approach that will safeguard these aims, while simultaneously rethinking

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[13] How the world's most improved school systems keep getting better McKinsey & Co 2010

their role in the light of new knowledge about innovation. An analytical approach is needed to develop a contextually appropriate blend of provision, commissioning, regulation, prescription and quality assurance.