

Towards a Science and Innovation Strategy

A response to the Department for Innovation, Universities and Skills' consultation
on ways forward from
the National Institute of Adult Continuing Education

Introduction

The National Institute of Adult Continuing Education (NIACE) is the leading non-governmental organisation for England and Wales representing the interests of adult learners, potential learners, and those who make provision for them. A membership organisation, NIACE is a registered charity and represents the interests of adult learners, advocating increased opportunities for adult learning and for better quality provision. It is particularly concerned to advance the interests of those who have benefited least from initial education and training.

NIACE welcomes the opportunity to contribute to discussions towards a new strategy on innovation. We agree with the Department for Innovation, Universities and Skills' belief that innovations, 'new discoveries, new products...new ways of thinking, new ways of working and new ways of doing business' (Secretary of State John Denham MP, 2007) can help us find solutions to some of the challenges facing the UK. As the quotation attributed to Einstein notes, 'we can't solve problems by using the same kind of thinking we used when we created them'. A society that is innovative rather than stagnant and complacent is necessary for Britain's future prosperity, well-being and cohesiveness.

Change can often be painful and novelty may aggravate or reinforce social tensions and inequalities. It is not innovation *per se* that brings about progressive social change but rather the motivations driving the inventive individuals that have access to them that will enhance prosperity and well-being. Individuals and communities are at the centre of procuring, demanding and utilising innovation.

This response emphasises the pivotal role that lifelong learning can have on the process of innovation. Indeed, NIACE believes that it is a necessary pre-condition for the the type of innovative ecosystem envisioned by the Government that it is open, includes the public and service sectors, and is user-led.

Re-defining innovation

NIACE endorses a definition of innovation which encompasses but is not limited to technology and financial success. We support the notion that innovation also involves the process of different combinations of ideas and their application to different settings. The process is not owned or controlled by any specific group or elite, it is happening everywhere.

NIACE recognises that one major 'stimulus for innovation is demand for it from the general public' (Secretary of State John Denham MP, 2008) but also that new forms of supply also shape demand. We agree that at present there is untapped potential for more demand. An important task for Government is to challenge a poverty of aspiration and to encourage a belief that, as the World Social Forum

says, 'Another world is possible'. Education is of critical importance here in building capacity.

The Sainsbury Report has emphasised that the best British research and development is absolutely world-class but that the UK falls short on intermediate skills rather than on high skills and this is also a thrust of Lord Leitch's review of skills, particularly for adults in the workforce.

Government's vision for innovation entails equality of the capacity to harness knowledge. This is why NIACE believes that the entitlement to innovation support should not be limited to universities, research centres, scientists and businesses. We welcome the Government's proposals to include further education colleges within the innovation strategy and would encourage the Government to incorporate all arenas of learning, including third-sector organisations within its scope.

Innovative people

As it is impossible to foresee with certainty what combination of ideas will bring about future change there is an element of risk inherent in fostering innovation. Ideas presently considered useless could bring about innovative changes tomorrow. This sits uneasily alongside a risk-averse, target-driven approach to public policy.

In addition it is also difficult to prescribe the kinds of skills, attitudes and behaviour which best foster a positive approach to innovation. It may be that innovation cannot be taught but it is certainly possible to offer educational experiences throughout life that foster curiosity and critical reflection and that encourage innovation. Again, this approach sits uneasily alongside vocational education and training programmes which are narrowly confined to functional competences. NIACE would certainly question any approach that equated capacity for innovation with any particular level of educational qualification.

Motivation, curiosity and a multi-disciplinary approach are often cited as being important in stimulating innovation. In the words of the chief officer of the Council for Industry and Higher Education, 'For many businesses, the issue do not revolve around levels of qualifications. They are after solutions to business problems. What many see as the added value of higher education is the provision of bright and reflective minds that can make business succeed.'

NIACE is concerned however that the Government's prioritisation of certain vocational skills and on level 2 qualifications may be hindering society's potential for innovation. The loss of 1.4 million places in English adult learning over a two-year period has narrowed participation and may result in the neglect of the innovation capacity and potential of large numbers of adults.

The Secretary of State for DIUS has expressed his Department's vision as being 'to reach the point where the UK is excited about science, values its importance to our economic and social well being, feels confident in its use and supports a representative, well-qualified scientific workforce.' However such a vision requires individuals confident in their own learning abilities to critically assess the

society around them. Achieving this is not simply teaching them more about how science works, "Science advances through trial and error" (CERI 2007 p.108), rather it is about giving them the power of being active and thoughtful lifelong learners.

NIACE believes that a strategy that focuses on funding support for innovation will not be enough and that a broad culture of curiosity will multiply the impact of the innovation we do generate. By cultivating a diverse and rich lifelong learning offer as part of the innovation strategy we would foster a culture that is intrinsically motivated to seek new knowledge and understandings that could possibly lead to innovation. Whereas extrinsic motivation is achieved through external rewards and sanctions, intrinsic motivation is triggered by a personal desire to understand. Understanding is described by the OECD as 'when the brain suddenly makes connections and sees patterns between the available information' (CERI 2007 p.70). Stimulating desire and motivation to seek new understandings and connections amongst everyone in society is as important as technological innovation in realising the Government's vision.

To that end NIACE believes that if Government is planning to invest in innovation then including modest investment in adult learning in the strategy would entail few risks for real benefits.

Innovation and Place

The Sainsbury Report identifies the regional level as the locus of innovation because of the focussed opportunities to network and collaborate more effectively. It notes that innovative capabilities are not easily diffused over wider areas and hence they are often better sustained through regional/sub-regional communities.

It is worth questioning and commenting on some of the assumptions here. There are assumptions regarding the nature of communities and it is known that one of the key issues in the post-scientific society is that communications technology has hugely enabled what has always been the case - that communities of interest can exist and indeed in the end have to exist on the basis of interest and not geography.

Furthermore, the infrastructural issues underpinning the capacity for regions and sub-regions to establish geographically clustered developments depends on a whole range of infrastructural issues that have nothing to do with innovation (unless that is the level of innovation on the part of the planners and regulators of course).

Wider research suggests that while communities of innovative interest can cluster remotely, they also benefit by having some level of geographical proximity. But if that geographical proximity relies on infrastructural issues so does the 'product and services' end of the innovative process - in other words, the outcomes, whatever those may be, of innovation have to get to its markets and this may mean, for example, arterial transport systems and ICT-based systems.

Models of what works in terms of developing innovative practice through regional, sub-regional and local systems are highly complex. They have also profoundly changed over the period of transition from the scientific society to the post-scientific society.

Studies¹ of the contrasts in commercial development around Boston and around Silicon Valley, California are of value here. They demonstrate what has enabled the Silicon Valley businesses to survive and grow (against all the predictions in the late 1980s and 1990s) whereas the older innovation industrial businesses around Boston declined/disappeared. It appears that innovative practice in Silicon Valley grew increasingly distant from any form of traditional innovation policy and far more crucial have been radically different models of commercial collaboration - what Professor Saxenian terms 'brain circulation' (there are obvious correlations with what might be called social networking) and other factors that would not be immediately linked with innovation development, such as the Californian immigration laws and the educational approaches of the Californian Community system.

Much of this seems very distant from the 'regional world' of Sub-National Economic Reviews, RDA project application processes and local authority regulatory practice. The regional challenge does seem to be, and some of this is being voiced as a result of the Sub-National Economic Review in terms of requiring much higher quality research data to support prioritisation focus, on how to develop more regional leaders who are sophisticated consumers of analysis, who are able to take what works, challenge what does not and bring people with them.

Conclusion

NIACE would welcome the opportunity to elaborate on any of the themes covered in this paper and looks forward to the opportunity of contributing further to discussions about a new innovation and science policy. In the first instance please contact Alastair Thomson, Senior Policy Officer.

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Sources:

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