ARTICLE

Smart successful networks: research as social practice

Jenny Ozga

University of Edinburgh, Scotland

Smart successful networks:
Research as social practice

Jenny Ozga

Synopsis

The paper covers three main topics, namely (i) research steering (in education) and its relationship to policy; (ii) changing knowledge production and its organisation in networks and (iii) the opportunities and challenges in building capacity in research in education in Scotland. It draws on a range of sources, including current literature on research and knowledge production, and on changing education governance, as well as a recent research project on knowledge transfer and experience of the Applied Education Research Scheme (AERS). The paper suggests that changes in knowledge and related changes in organisational forms and processes combine to alter fundamentally the nature of research and thus of the research-policy-practice relationship. Research now needs to be understood as the co-production of contextualized knowledge in contexts of application and implication. Such developments produce considerable challenges to existing research practices and cultures, and these challenges may be best met from a 'network' form of research organisation. The network form may sit well within the small, cohesive education system of Scotland, if collaborative relationships can overcome problems of trust and established hierarchies, both within universities and between researchers and policy-makers.

Introduction

The paper takes as a central premise the importance of knowledge and knowledge production. The significance of knowledge in policy terms is apparent from the rhetoric of the Knowledge Economy, and from the key role that the acquisition and production of knowledge plays in providing competitive advantage-at least in the policy discourse (Kenway, Bullen, & Robb, 2004; Peters, 2001). Knowledge is the key resource within late capitalism. Castells (1996, p.17) argues that we are moving from an industrial economy in which productivity depended upon energy sources and their innovative applications to an informational economy in which 'the source of productivity lies in the technology of knowledge generation, information processing and symbol communication'. The kind of knowledge that is important is not just the regular knowledge that has always informed economic production. Rather, he argues, what is distinctive in contemporary economic development is 'the action of knowledge upon itself as the main source of productivity'. Its production is, therefore, more closely 'steered' by

policy-makers in Europe and beyond, who are persuaded that it is best produced in deregulated education systems in which competition is maximised, in which business is actively engaged or business-like methods are adopted, and in which an entrepreneurial habitus is developed (Ozga, Seddon, & Popkewitz, 2006; World Bank, 2002).

Schooling/education are now, more than ever, part of a repertoire of policy that contributes to economic and social change, and they do this in interconnected ways that encompass workforce training, the fostering of experimental and risk-taking attitudes, and the production of reliable guidance to policy-makers about the impact of interventions. Through teaching and research, universities (alongside an increasing number of commercial organisations) make significant contributions to the building of intellectual capital and capacity for innovation; to development of the workforce and to providing resources for evidence-informed policy-making that supports the management of communities in ways that seek to minimise alienation and exclusion and support self-reliance and enterprise (Rose, 1999). The centrality of research, and the importance of knowledge production to economic growth and to governance create an enhanced level of interest from policy-makers in the processes of knowledge production, and has resulted in the growth of performance management and measurement, competitive tendering, and highly specified agendas for research in the UK, in Europe, and beyond.

The 'travelling policy' (Ozga & Jones, 2006) that promotes globalised forms of knowledge production encounters embedded practices and assumptions in national and institutional contexts, that may be more or less accommodating of change. Globalising agendas often call up active adaptation or indigenisation of travelling policy (Ozga & Lingard, 2006, forthcoming) and may also encourage the more explicit articulation of the preferred characteristics of knowledge production, drawing on assumptions about 'national capital'(Lingard, 2006). Such responses may be particularly necessary in the context of research production in education in Scotland given education's vulnerability to the modernising and marketising pressures of the UK government. Of course, post-devolution Scotland is also open to national inflection (Allan, 2003; Paterson, 2000): but much depends on the capacity

of researchers and policy-makers in education in Scotland to recognise the productive characteristics of that national capital, for example its strong civic inflection, and to challenge some of its more parochial elements.

In reviewing the possibilities for a productive engagement with the redesign of knowledge production in education in Scotland, I draw here on some relevant research evidence and literature, most recently in the field of knowledge transfer, and on a long-standing preoccupation with the relationship between research and policy in education (Ozga, 2000). I also draw on recent experience of working in the Applied Education Research Scheme (AERS), in the network on Schools and Social Capital (Ozga, 2007, forthcoming).

Research steering and its effects

There is an increase in the steering of education research by policy which is by no means confined to Scotland, but extends to the wider UK, to Europe and well beyond (see for example Dehli & Taylor, 2006; Ranis & Walters, 2004; Roberts, 2006). These processes are shared, and there is considerable evidence that they act to produce similar trends in research production. For example there is a new emphasis on limited forms of evidence, which enables performance measurement and management of universities and schools. These approved forms of enquiry may reduce or conceal the significance of factors that profoundly affect system and individual performance, for example social class difference and diversity, and may neglect their implications for education policy and practice (Luke, 2003).

The global promotion of particular kinds of evidence as the basis of policy also seeks to transform *politics* by requiring that policy-making organisations and policy makers acquire, manage, disseminate and produce knowledge, and very significant efforts have been made in recent years to extend policy control of knowledge production and use and diminish autonomy in knowledge production. The process of data production and management, for example, has seen shifts away from long-term engagement and involvement of university-based researchers (Croxford, 2006). Data production and use carry significant messages about the apparently objective and rational processes that are claimed to guide policy and that may seek to redefine the ways in which knowledge producers and the political world interact (Desrosieres, 2002; Rose, 1999)..

Castells (1996) and others point to the ways in which this apparently neutral process of reliance on evidence reduces politics to informational rather than democratic politics and risks a crisis of democracy, as citizens are transformed from participants in government to choosers or consumers of goods and services (Clarke, 2004). In the field of education research, claims of neutrality and objectivity are invoked to conceal ideological positions (such as those attacking comprehensive schooling and promoting differentiated provision). I am not suggesting that a pro-comprehensive stance is above ideology, but that there is a particular ideological manoeuvre in play that combines a selective reading of 'evidence' with the promotion of increased differentiation. This shift is part of a move to implicate knowledge in governance. Mastering and, above all, disseminating knowledge (selected and presented in particular ways, especially in tables of performance) become key elements in policy development. Dissemination of knowledge constitutes a form of power that is especially important in apparently decentralised and deregulated systems.

Research is being steered towards providing information about 'what works', in a context where policy-makers claim to be no longer bound by ideology and thus free to act on the basis of the best available evidence. A number of policy initiatives in the UK support the apparently enhanced role of education research. These include the establishment of the international Campbell Collaboration (http://www.campbellcollaboration.org/) and the creation of the Evidence for Policy and Practice Co-ordinating Centre (EPPI-Centre) at the Institute of Education, London (http://eppi.ioe.ac.uk). Educational research and policy are becoming closer through specific funded programmes such as the Economic and Social Research Council (ESRC) Teaching and Learning Research Programme (http://www.tlrp.org), which identifies key 'problems' and constructs research-informed resources for application by practitioners.

The evidence-based movement is general, and embraces areas of social research beyond education. There has been a particular focus on education, however, because of the strong desire of the successive UK New Labour governments to de-politicise education as it moves away from the Labour Party's historic commitments (for example to equality of opportunity) and embraces market-driven reforms (with very strong emphasis on choice and competition) and significant involvement of private sector providers - for example in building schools, providing teachers, carrying out inspections, administering the testing and examinations regimes and carrying out research and evaluation. The criticisms of education research that were launched in the late 1990s in England need to be understood as part of an agenda that sought to

weaken the position of education within the Academy. The main criticisms of education research were and are that it was not cumulative; that it was fragmented and disparate; that sociological research in education was too theoretical and disconnected from practice; that education research lacked objectivity and therefore reliability; that it was poorly articulated with classroom practice and with policy-making (see, for example, Hillage, Pearson, Anderson, & Tomkin, 1998; Tooley & Darby, 1998).

These criticisms have been less strident in Scotland, but they are there, just as they feature in different continental European systems, and in North America (Sobe, 2006). My point is not to debate the accuracy or otherwise of these criticisms of education research, but to underline the ways in which research is being transformed by governments and other agencies, using these critiques to justify new kinds of knowledge production.

Knowledge production

If we turn to the experience of doing research, and the conditions of knowledge production, there is immediate evidence of increased steering in all the dimensions of the process: time is compressed, social relations are damaged, long-term perspectives are disrupted (Collinson,2004; Tight, 2000). It is difficult to identify - or even remember - conditions in which research is characterised by immersion in a topic and the pursuit of possible avenues of enquiry. Research in education - as elsewhere - is business-like: the dominant activities are getting funding, employing and managing researchers, maintaining relations with research users, responding to their research needs and ensuring that outputs are delivered on time. For career researchers, of course, such pressures were, and are, particularly sharp, but they are shaping the research experience of all academic knowledge producers in different university contexts. The competition for funding leads to increasingly professionalized research proposal production processes, so that writing proposals becomes a specialist task, disconnected from the work of investigation. Specialist units deal with the complexities of European Commission proposals, and with intellectual property rights and the protection of previously existing know-how. This apparatus of research production may at best neglect, and at worst eliminate, the productive spaces of exchange and reciprocity that foster curiosity and fuel enquiry.

Attempts to connect cost, experience and quality in a virtuous circle meet with demands by institutional managers and many funders for simpler, more straightforward and cheaper research design.

Pressures to simplify complex social phenomena are increased by the growth of influence of agencies outside the research community, and by commercial competition from private-sector survey research organisations, consultancies, accounting firms, dedicated research businesses, start-up companies and hybrid networked organisations based in public and private agencies. Such competition, together with business models that promote hierarchical rather than collegial research organisation, create 'core' and 'peripheral' research workers, and promote a new global division of research labour (Bullen, Robb, & Kenway, 2004).

The discussion so far has emphasised the negative consequences of the heightened importance of knowledge production in the new knowledge economy. However, there are possibilities for a less negative reading of these developments, through recognition of the inherent difficulties and contradictions of knowledge production and the related problematic nature of attempts to steer it or extract maximum value from it. The processes described above may, indeed, increase quantity of outputs while driving down costs, but provide no guarantee of quality, nor do they consolidate and review existing knowledge stocks in order to promote 'the action of knowledge on itself' identified (above, p.8) as essential by Castells.. Creative thinking, innovation and problem-solving are, perhaps, the key capacities that policy-makers need from education providers and researchers, but these capacities do not seem to be encouraged by current production processes. Indeed, the factors that encourage knowledge production that is valuable in economic contexts are absent from these arrangements. Stehr (2002, p.27) argues that knowledge is activated in situations that are not fully regulated or defined through routine processes. Such situations, where there is some freedom in the course of action that might be chosen, support creative problem-solving that lead to increases in 'how-to-do-it' capacities (Lave & Wenger, 1991) that can provide a competitive edge in economic and social development. It is this contradiction between research steering and its consequences, and the need to foster creativity and innovation, which preoccupies me here, and leads me to raise the possibility of active adaptation, mediation or translation of research steering in the Scottish context.

Education research has its own particular and peculiar significance, firstly because education is such a significant element of Scottish identity, one of the three institutions, with Law and the Church, that 'mark the social and cultural life of Scotland as distinctive' (Humes & Bryce, 2003, p.108). Scottish education both shapes and reflects Scotland's view

of itself, and contains a complex mix of conservative and progressive tendencies, summarised by Humes and Bryce as enlightened in the rhetoric of equality and inclusion, but characterised by bureaucratic control and the dominance of professional interests (Humes & Bryce, 2003, pp.117-8). That conservative and progressive mix is also present in education research, which may be used to legitimise practices and policies advanced by government, but also supports the learning and active knowing necessary for living productive lives and for sustaining full citizenship (Ozga *et al.*, 2006). Again, we can see the contradiction of knowledge within the knowledge economy. This contradiction hinges on the extent to which knowledge is understood as a collective resource, rather than a private source of competitive advantage, or a resource for governing. The specific policy context of Scotland provides some evidence of understanding of the importance of research as a collective resource. This is evident in policy for knowledge transfer, which embraces social justice and civic agendas (SHEFC/Scottish Executive, 2002). In relation to research performance in education, policy-makers in Scotland currently support a collaborative project in capacity building in research in education, the Applied Education Research Scheme (AERS) which seeks to enhance research performance and raise attainment in schools in Scotland. The commitment to collaboration and to the principle of network organisation across the system were factors that made AERS possible, and continue to create the conditions in which it operates.

Network principles

In the discussion so far I have highlighted the contradictions of knowledge production in the current context, pointing out (a) its increased significance for the economy and government; (b) the related growth of research steering, (c) the negative effects of steering on innovation and creativity, (d) the potential for progressive development in the mediation of steering pressures. Network forms carry possibilities for collaboration, but they are open to capture by particular interests, and they have been developed by governments as ways of ensuring co-operation and joint resource mobilisation of those outside their hierarchical control (Kickert, Klijn, & Koppenjahn, 1997). Networks may be seen, then, as a new form of governance that avoids the difficulties of hierarchy or market, enabling the mobilisation of political resources in situations where these resources are widely dispersed between public and private actors.

Yet it is possible to see the coincidence of new forms of knowledge production and the network form as offering possibilities for democratisation of knowledge production in a closer relationship with society and wider social movements (Liberatore & Funtowicz, 2003; Nowotny, Scott, & Gibbons, 2003). Network forms enable the production of interactive, iterative, problem-focused, trans-disciplinary 'Mode 2' knowledge (Gibbons *et al.*, 1994). Unlike Mode 1 (disciplinary) knowledge, Mode 2 knowledge is deemed to be valid not by narrowly defined scientific communities but by wider 'communities of engagement' (Nowotny *et al.*, 2003, p.192). This conceptualisation of knowledge-in-action draws attention to social learning processes that recognise how knowledge moves differently within and between different social groups (Brown & Duguid, 2000). The co-production of knowledge in networks requires research to:

> transcend the immediate context of application, and begin to mark out, anticipate and engage reflexively with those further entanglements, consequences and impacts that it generates. (Gibbons, 1999, p.84)

There is, then, a further tension to be added to those already highlighted in this discussion - that between the potential of the network as an additional, powerful form of governance, drawing researchers in to the governing process, and the potential to create an 'agora' in which knowledge production moves beyond the political system and the market place and is democratised (Nowotny *et al.*, 2003, p.192).

Conclusion: Research networks in Scotland

Moving towards knowledge production in these new forms, and actively pursuing agendas that work in the context of application and implications, presents substantial challenges to current research cultures (and to policy/professional and other cultures, too, but I'm focusing here on researchers). Research on Knowledge Transfer[1] (Byrne & Ozga, 2006; Ozga & Jones, 2006) also suggests a need for changed researcher (and other) behaviour and expectations in order to build longer term relationships between the different co-producers of knowledge, that provide real learning opportunities and that recognise experience and capacity that has been excluded in the past (Ozga, 2007, forthcoming).

This can only be achieved in the context of networks that support genuine interaction, that provide stimulation and sustain development. Can these be built in Scotland? There are advantages of scale and accessibility, and of relatively explicit and publicly-supported policy priorities, as signalled in the national debate that produced the National Priorities (Munn *et al.*, 2004). These advantages are visible in some of the processes of knowledge production in the AERS project. The AERS network on Schools and Social Capital (SSC[2]) has explicitly

adopted network principles. These have been directly engaged with in the network from its inception. The network has a mixed membership: it draws in members from the practitioner communities (teachers and other professionals), the voluntary sector, community, parent and pupil organisations, as well as policy-makers, more conventionally defined (members of the Scottish Executive, HMIe, Directors of Education and local authority officers). From its inception, there was a strong drive to produce a network that was reasonably representative of the population with an interest in education, so that the development of research agendas could be constantly reviewed and mediated through the network discussions, and shared understanding (including understanding of different views and positions) could thus be built as part of the research process. The network has built 'strong' collaborative research principles (Heron, 1996) into its processes so that people are connected and drawn in; organisation is non-hierarchical and there is a focus on the linkages between agents, on what flows between them and their transactions. Appropriately, in a network preoccupied with social capital, strong linkages between producers and end-users (involving trust, reciprocity, and good communication) are understood as vital and as enhancing successful innovation and good quality knowledge production.

The advantages of a small, well-networked system can, of course, turn into substantial blockages to the democratisation of research. Critiques of the Scottish policy elite and recognition of the capacity of that leadership class to defend its interests (Humes, 1986) draw attention to a degree of attachment to hierarchy and an accompanying conservatism in the culture, which may also be evident in the culture of knowledge production. The research culture in education in Scotland is, I would suggest, somewhat conservative and rather traditional. As a participant observer who has worked elsewhere for over 30 years, the research culture in Scotland seems to permit performances of masculinity that have been challenged elsewhere, and to be characterised by a (related) absence of sociality. By this I mean a lack of relaxed, informal interchange of ideas that sustains recognition of research as situated practice (Yates, 2004, p.3). Such recognition involves understanding of people's ways of thinking and acting; and of the importance of workplace behaviours in supporting or questioning development. These human dimensions are significant in the development of a healthy research culture, as is the adoption of strategies for building individual and organisational capacities that promote reflexivity.

The combination of attachment to hierarchy and weak social relations may well have negative consequences for networks, which need to be addressed if the potential of the form is to be realised fully. Networks do not appear and thrive without investment, and they also require change. Individuals need to be able to recognise and acknowledge their particular dispositions, values and practices that produce their habitus, or 'ways of working' (Clegg & McNulty, 2002). Assertion of one way of working can be experienced as a form of professional imperialism that denies or silences other knowledges and voices, and perpetuates divisions between network members. Networks need constant refreshment: through new and continuing connections and exchanges they produce energy and excitement. Indeed, the progressive possibilities of networks may be directly connected to the inherent ungovernability of the form. Networks of support, interaction, stimulation, and development thrive on instability and challenge (Beresford, 2001). It follows that over-zealous management of networks, influenced perhaps by an embedded conservatism in the research culture, may stifle these initiatives, and tilt the balance towards networks as governing forms rather than democratising processes of knowledge production.

This would be a significant lost opportunity, in a context where the possibilities for indigenisation of research steering processes are considerable, and where there are cultural resources that could be brought into play, not least in Scotland's civic universities. As Delanty (2003, p.81) puts it:

> Universities can play a major role in the knowledge society if they accept what might be called the principle of transgressivity, that is the university is not the exclusive site of expertise but a site of public discourses ... universities are transgressive cognitive zones where the contradictions of the knowledge society are most apparent, and, as such, the potential exists for universities to become important agents of the public sphere, initiating social change rather than just responding to it.

[2] These observations are based wholly on the author's experience as a participant in AERS SSC, and are limited to that network, as she does not have experience of the entire AERS scheme.

References

Allan, J. (2003) Daring to think otherwise: Educational policy making in the Scottish Parliament. *Journal of Education Policy*, 18 (3), 289-301.

Beresford, P. (2001) Participation and social policy: Transformation, liberation or regulation? *Social Policy Review*, 14, 265-290.

Brown, J. S. & Duguid, P. (2000) *Organizing knowledge. Knowledge Groupware and the internet.* Kidlingto, Oxon: Butterworth-Heinemann.

Bullen, E., Robb, S. & Kenway, J. (2004) Creative destruction, knowledge economy policy and the future of the Arts and Humanities in the academy. *Journal of Education Policy*, 19, 3-22.

Byrne, D. & Ozga, J. (2006) *Knowledge transfer: Researchers' responses to policy.* Knowledge transfer project working paper no 5 (available at www.ces.ed.ac.uk/ESRC%20KT/publications.htm)

Castells, M. (1996) *The rise of the network society.* Oxford: Blackwell.

Clarke, J. (2004) *A consuming public?* Lecture in the ESRC/AHBR Cultures of Consumption Series, London, Royal Society, April.

Clegg S. & McNulty, K. (2002) Partnership working in delivering social inclusion. *Journal of Education Policy*, 17, 587-601.

Collinson, J.A. (2004) Occupational identity on the edge: Social science contract researchers in higher education. *Sociology*, 38, 313-329.

Croxford, L. (2006) *The Youth Cohort Surveys: How good is the evidence?* CES Briefing 38. Edinburgh: Centre for Educational Sociology.

Delanty, G. (2003) Ideologies of the knowledge society and the cultural contradictions of higher education. *Policy Futures in Education*, 1, 71-82.

Dehli, K. & Taylor, A. (2006) Towards a new government of educational research: Refashioning researchers as entrepreneurial and ethical subjects. In J. Ozga, T. Seddon & T.S. Popkewitz (Eds.), *Education research and policy: Steering the knowledge-based economy.* London: Routledge.

Desrosieres, A. (2002) *The politics of large numbers: A history of statistical reasoning.* Cambridge, MA: Harvard University Press.

Gibbons, M. (1999) Science's new social contract with society. *Nature* 402 (supp), December 2. London: Macmillan.

Gibbons, M.., Limoges, C., Nowotny, H., Schwartzmann, S., Scott, P. & Trow, M. (1994) *The new production of knowledge.* London: Sage.

Heron, J. (1996) *Co-operative inquiry: Research into the human condition.* London: Sage.

Hillage, J., Pearson, R., Anderson, A. & Tomkin, P. (1998) *Excellence in research in schools.* London: HMSO.

Humes, W.M. (1986) *The leadership class in Scottish education.* Edinburgh: John Donald.

Humes, W.M. & Bryce, T.G.K. (2003) The distinctiveness of Scottish education. In T.G.K. Bryce & W.M. Humes (Eds.), *Scottish education: Post devolution.* Edinburgh: Edinburgh University Press.

Kenway, J., Bullen, E.. & Robb, S. (2004) Global knowledge politics and exploitable knowledge. In J.Kenway, E,Bullen & S.Robb (Eds.), *Innovation and tradition: The Arts, Humanities and the knowledge economy.* New York: Peter Lang.

Kickert, W. J. M., E.-H. Klijn & Koppenjahn, J.F.M. (1997) *Managing complex networks.* London: Sage.

Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge: Cambridge University Press.

Liberatore, A. & Funtowicz, S. (2003) 'Democratising' expertise and 'expertising' democracy: What does this mean, and why bother? *Science and Public Policy*, 30, 146-150.

Lingard, B. (2006) Globalisation, the research imagination and de-parochialising the study of education. *Globalisation, Societies and Education*, 4, 79-108.

Luke, A. (2003) After the marketplace: Evidence, social science and educational research. *Australian Educational Researcher*, 30, 87-107.

Munn, P., Stead, J., McLeod, G., Brown, J., Cowie, M., McLuskey, G., Pirrie, A. & Scott, J. (2004) Schools for the 21st century: The national debate on education in Scotland. *Research Papers in Education*, 19, 432-452.

Nowotny, H., Scott, P. & Gibbons, M. (2001) *Rethinking science: Knowledge and the public in an age of uncertainty.* Cambridge: Polity.

Nowotny, H., Scott, P. & Gibbons, M . (2003)

Introduction: Mode 2 revisited: The new production of knowledge. *Minerva*, 41, 179-194.

Ozga, J. (2000) *Policy research in educational settings: Contested terrain*. Buckingham: Open University Press.

Ozga, J. (2007) Co-production of quality in the Applied Education Research Scheme. *Research Papers in Education* (in press).

Ozga, J. & Jones, R. (2006) Travelling and embedded policy: The case of knowledge transfer. *Journal of Education Policy*, 21, 1-19.

Ozga, J. & Lingard, B. (2006 forthcoming) Globalisation, education policy and politics. In B.Lingard & J.Ozga (Eds.), *The Routledge reader in education, policy and politics*. London: Routledge.

Ozga, J., Seddon, T. & Popkewitz, T. S. (Eds.) (2006) Education research and policy: Steering the knowledge-based economy. *World Yearbook of Education 2006*. London & New York: Routledge.

Paterson, L. (2000) Civil society and democratic renewal. In S.Baron, J.Field & T.Schuller (Eds.), *Social capital: Critical perspectives*. Oxford: Oxford University Press.

Peters, M. (2001) National education policy constructions of the knowledge economy. *Journal of Educational Enquiry*, 2 (1) published on line at (http://www.education.unisa.edu.au/JEE/) (accessed July 2005).

Polanyi, M (1966) *The tacit dimension*. London: Routledge.

Ranis, S. & Walters, P.B. (2004) Education research as a contested enterprise: The deliberations of the SSRC-NAE Joint Committee on Education Research. *European Educational Research Journal*, 3, 795-806.

Roberts, P. (2006) Performativity, measurement and research: A critique of performance-based research funding in New Zealand. In J. Ozga, T. Seddon & T.S. Popkewitz (Eds.), *Research and policy: Steering the knowledge-based economy*. London: Routledge, Taylor & Francis.

Rose, N. (1999) *Powers of freedom: Reframing political thought*. Cambridge: Cambridge University Press.

Scottish Higher Education Funding Council (SHEFC) and Scottish Executive (2002). *Research and knowledge transfer in Scotland: Report of the Scottish Higher Education Funding Council and Scottish Executive Joint Task Force*. Available on line at www.shefc.ac.uk/library/06854fc203db2bdfbd0000 00f527623199/report.pdf) (accessed August 2005).

Sobe, N. (2006) Accountability in US educational research and the travels of governance. In J.Ozga, J.Seddon & T.S.Popkewitz (Eds.), *Research and policy: Steering the knowledge-based economy*. London: Routledge, Taylor & Francis.

Stehr, N. (2002). *Knowledge and economic conduct*. Toronto: University of Toronto Press.

Tight, M. (2000) *Academic work and life: What it is to be an academic and how this is changing*. Amsterdam: J.A.I. Press.

Tooley, J. & Darby, D. (1998) *Educational research: A critique*. London: HMSO.

Wenger, E. (1998) *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.

World Bank (2002) *Constructing knowledge societies: New challenges for tertiary education*. Washington, DC: World Bank.

Yates, L. (2004) *What does good education look like?* Buckingham: Open University Press.