



RSA

Action and Research Centre

Rebalancing the UK's Education and Skills System

Transforming capacity
for innovation and
collaboration

Louise Bamfield

September 2013

BEWARE
SPARKS
and
HOT METAL
STAY BACK!

Contents

Foreword	3
Introduction	4
1. A divided education and skills system	6
2. Improving basic and functional skills	9
3. Enhancing vocational teaching and learning	11
4. Building collaborative and innovative capacity	12
Conclusions	14
References	15

The **RSA** in
partnership with



Foreword

This thinkpiece was commissioned by the British Council to inform our joint policy dialogue on “The Quest for Excellence: the Skills Revolution in the UK and South Asia”. Held in September 2013, the event engaged over 130 senior policy makers from India, Pakistan, Bangladesh, Sri Lanka, Nepal, Afghanistan and the UK. It is one of four papers commissioned for the event, including the latest benchmark research into Skills in South Asia from the Economic Intelligence Unit. All are available on the British Council’s website.

With a focus on 16–24 year olds, this paper aims to give an objective view on the skills challenge in the UK, and how skills can meet generational and labour force challenges. From a UK perspective, we know that the ‘skills challenge’ is a combined problem of certain types of skill apparently being underachieved or under-supplied, and others being under-utilised. Achieving a better match between supply and utilisation demands a higher quality of provision across the board.

In reviewing the future prospects for the UK skills and further education sector, we know that there is much to learn from other parts of the world, including the dynamic and diverse economies of

South Asia, which in many cases appear better attuned to meeting the demands of European consumers and business sectors than their own economies. South Asia’s emerging demographic dividend also raises challenges about how the state and private sector can meet the aspirational demands of new generations.

RSA Education seeks to realise the potential of all learners by developing human capabilities and creating conditions for human freedom and flourishing. Our programme of policy research and practical interventions seeks to find innovative solutions to entrenched educational problems, based on our core principles of tackling educational disadvantage, democratic participation, and open-minded enquiry.

Throughout its 250 year history, the RSA has maintained an interest in young people, vocational education and broader skills development. We hope that this paper makes a useful contribution to discussions both in the UK and beyond, and look forward to working with the British Council and other partners to shape debate, inform policies and, above all, change practices to help more young people fulfil their potential.

Joe Hallgarten

Director of Education

The RSA

Introduction

One of the most important questions for any democratic society is in what does the nation's wealth consist, and how can it be utilised for the benefit of every citizen? While nations rich in natural resources, such as oil and valuable minerals, may have the luxury of investing in consumption rather than education, countries without such reserves cannot afford *not* to invest in their most valuable natural asset – the skills and knowledge of their people (Schleicher 2012). This view is substantiated in the British context, where recent UK Governments have pledged to achieve prosperity for *all* citizens by becoming a ‘world leader’ in skills, with the aim of promoting growth, prosperity and employment, at the same time as breaking cycles of poverty and inter-generational disadvantage (Leitch 2006; BIS 2011). While the financial crash of 2008 and subsequent recession has intensified pressure on government to restore economic growth and rebalance the UK economy – away from over-reliance on financial services and the public sector and towards technology and knowledge-based industries – it has also strengthened calls to move away from a consumption-based and debt-fuelled way of living.

Partly driven by new economic realities, there are signs of a renewed belief in the power of creativity and innovation to enrich people's lives

Partly driven by new economic realities, there are signs of a renewed belief in the power of creativity and innovation to enrich people's lives (Lent 2013). As expressed by the UK Business Secretary, Vince Cable, ‘most people have a fundamental need to work’, not only to earn a wage to support themselves and their families, but also as a vital way of ‘releasing their own creativity and capacity to innovate’ (BIS 2011). While policy has traditionally focused on investment in *human capital*, we suggest that forms of *social* and *creative capital* represent equally significant sources of hidden wealth (Halpern 2010). This personal and collective capacity speaks to a deeper human need – to be recognised and valued for what one produces for oneself and others, rather than simply accumulating more material goods, and to contribute to a more socially useful range of outcomes (RSA and LSIS 2011).

Creating the conditions for a richer social and economic life will not be easy, not least because the new enterprising and collaborative spirit challenges some deeply ingrained British attitudes about the nature of individual ability and the value ascribed to different types of learning. By comparison to other nations (such as the Pacific Asian societies), people in the UK are more likely to take a ‘fixed’ view of people's abilities, seeing them as static or innate, rather than open to growth and development (Barber *et al* 2012, Spencer *et al.* 2013). The continued prevalence of such a mindset partly accounts for the long-standing socio-economic gap in pupil attainment at all stages of English schooling. British attitudes also reveal a lingering anti-entrepreneurialism, from which enterprise is still compared unfavourably to the professions, as a less safe or respectable career choice for the ‘brightest’ and ‘most talented’ young people (Lent 2013). This stems in part from a deep-rooted preoccupation in English schooling with core academic knowledge,

reinforced since the 1990s by a regime of intensive testing, which has squeezed out space for developing the wider range of skills vital for life and work in the twenty-first century.

The next section begins by discussing the real skills gap at the root of the UK's divided system, before proposing a whole system framework, which offers a useful tool to use in assessing current policies and practice. The following sections then review progress in 'raising the floor' in basic and functional skills, improving the quality of vocational teaching and learning, and building capacity for collaboration and innovation.

1. A divided education and skills system

The most prevalent issue is not actually skill shortages or skill gaps but the under-utilisation of people's skills

Is the government on track to build a world class skills system? Although the specific targets set by the Leitch Review¹ under the previous government have since been abolished, they still offer a way of comparing the UK's progress internationally. According to the most recently available projections, attainment of higher skills is likely to reach or slightly exceed 40 percent by 2020, thus meeting the original target for university-level qualifications. By contrast, the relevant targets for intermediate and low skill levels are unlikely to be met, with a particular shortfall anticipated in the number of adults qualified to the lower level.

As Professor Alison Wolf observes, measuring progress against precise targets only makes sense if the need for different levels of qualifications can actually be predicted (Wolf 2011). The government's strategy for promoting skills and employment therefore must start with the realities of the current labour market – understanding how it functions, what skills individuals and employers need and what qualifications they actually recognise – but without pretending that specific future skill needs can be forecast with any accuracy. The recession has accelerated structural change within the economy. The last decade has witnessed significant growth in knowledge-intensive industries and occupations, whilst job losses have primarily focused on the lower skilled and young people.

In difficult economic circumstances, it is even more important that skills and qualifications are aligned with employer and customer demand. Data highlight the apparent mismatch between skills gained and those needed in the economy: for example, in 2012, 194,000 hairdressers were trained for just 18,000 jobs, while only 123,000 people were trained for 274,000 jobs in construction (LGA 2013). Nevertheless, the most prevalent issue is not actually skill *shortages* (lack of skills amongst those recruited to the labour market) or skill *gaps* (amongst those already in work), which concern only one per cent and fewer than ten per cent respectively, but rather the *under-utilisation* of people's skills, which affects between 35 and 45 percent of the workforce (Wright 2010).

1. The Leitch Review of Skills was an independent review by Lord Leitch, the Chairman of the National Employment Panel, commissioned by the UK Government in 2004, 'to identify the UK's optimal skills mix for 2020 to maximise economic growth, productivity and social justice, set out the balance of responsibility for achieving that skills profile and consider the policy framework required to support it.' The final report, published in December 2006, recommended that UK should urgently invest in raising achievements substantially at all levels of skills, with a longer-term goal to become a 'world leader' in skills by 2020, as benchmarked against the upper quartile of the OECD – effectively a doubling of attainment at most skill levels.

Continued confusion about the objectives of vocational education helps explain why vocational pedagogy has for so long been under-researched and under-theorised

At the heart of the skills debate is the argument that the provision of ‘employability skills’ in this country is poor and that vocational education is divorced and considered inferior to academic education (Wright 2010).

As Roberts (2009) argues, ‘the emphasis on a set of core academic skills, and a culture of intensive testing, has too often squeezed out another set of skills – how to think creatively, how to collaborate, how to empathise – at the very time when they are needed more than ever’. Further education in the UK has historically been the ‘everything else’ sector, serving the needs of school leavers not destined for higher education, adults lacking basic skills and participants in active labour programmes, as well as other adult learners who seek to advance their skills and qualifications (Coats *et al.* 2007). In this sense, it has been defined by what it is *not*: ie the established academic route followed by generations of the highest-attaining students, typically from middle-class backgrounds, destined for professional careers in the civil service, medicine, the law and other highly esteemed occupations. While this image of a class-ridden society may seem old-fashioned, what is striking about the nature of British society in the 21st Century is the extent to which social inequalities have in many ways become *more* entrenched rather than less (National Equality Panel 2010).

Continued confusion about the objectives of vocational education helps explain why vocational pedagogy has for so long been under-researched and under-theorised. To help fill this ‘yawning gap’ in conceptual thinking, Lucas *et al.* (2012) have developed a theory of vocational pedagogy, based upon three domains of vocational learning (physical materials, people and symbols) and six broad outcomes: functional skills, applied skills & expertise; craftsmanship; resourcefulness; business-like attitudes and wider skills for growth. We believe that it is important to show how such a framework is relevant to *all* learners, regardless of whether they follow predominantly ‘academic’ or ‘vocational’ pathways. Thus, we have modified the Centre for Real-World Learning’s framework, to show how it captures a broad range of skills, knowledge and personal qualities that are vital for life and work in the 21st Century:

Figure 1: A whole system framework for skills, knowledge and capabilities

- 1. Functional and basic skills:** including language comprehension & communication, numeracy & digital literacy.
- 2. Specialist or advanced knowledge (knowing *how* and knowing *that*):** encompassing practical, technical, craft-based and theoretical/conceptual.
- 3. Craftmanship or Professionalism:** a set of attitudes and dispositions towards ones work, especially the sense of pride in a job well done; the capacity to exercise informed, expert judgement drawing on a wealth of relevant experience.
- 4. Relational and emotional intelligence:** relating to and empathising with other people; knowing how to present and communicate to different audiences.
- 5. Business and enterprise skills:** understanding the economic and social sides of work, eg being able to spot and take advantage of market opportunities; managing time and resources effectively etc.
- 6. Innovative and collaborative capacity:** being inspired to collaborate and innovate, enquire and investigate, adapt and respond to changing circumstances.

There is much here that schools can learn from FE colleges on innovative approaches to teaching and learning

By capturing a richer set of skills, knowledge and capacities, a framework for the whole of education – vocational and academic – offers a powerful way to inform the design of future policy and practice, as well as a revealing way to assess the current set of curriculum, instructional and organisational policies and practice. Readers will doubtless wish to add certain items to the list, but it provides a helpful beginning to such a conversation. Some may question the grouping together of all specialist and advanced capabilities – including abstract or conceptual knowledge, as well as applied craft or technical skills, into one broad category. Whilst scholarly debate on conceptualisations of ‘knowledge’ continues (Pring 2004), we deliberately seek to challenge the dualism between the ‘practical’ and the ‘academic’ (‘knowing *how*’ and ‘knowing *that*’) which continues to be such a prominent and arguably damaging feature of the UK education system (Pring 2013).

What this framework (or others like it)² usefully highlights is the range of learning experiences that are needed to develop this broader and arguably richer set of skills, knowledge and personal qualities. There is much here that schools can learn from FE colleges on innovative approaches to teaching and learning, including how to introduce children to the world of work, in age appropriate ways, from a much younger age than is generally done at present.³ Although space precludes us here from evaluating progress in every category, we focus below on the extent to which UK government policy is set to increase the level of basic and functional skills, as it intends; before going on to consider what changes are needed to achieve a broader set of innovative and creative capacities.

2. Other organisations have developed similar frameworks: for example, the Studio Schools Network has developed the ‘CREATE’ framework, comprised of a wide range of skills: Communication, Relating to people, Enterprise, Applied skills, Thinking skills and Emotional intelligence.

3. The final report of the Suffolk Education Inquiry, ‘No School an Island’ (Bamfield *et al.* 2013) sets out a number of recommendations on how this entitlement to engaging with the world of work might be realised in schools.

2. Improving basic and functional skills

To date, the hoped-for gains in children's learning that have been demonstrated elsewhere have yet to materialise

Achieving significant improvements in basic and functional skills is a central part of the UK Government's strategy for improving the skills of the current and future workforce, as well as being a significant strand of its 'fairness' strategies – those aimed at reducing inter-generational poverty and disadvantage and improving social mobility – where the emphasis is on 'raising the floor' in the level of basic skills and qualifications, whilst 'narrowing the gap' in children's learning opportunities and outcomes.

According to the Government's own estimates, the education policy with the greatest potential to close the gap in children's early development is the entitlement to 15 hours of free childcare available for all three and four year olds.⁴ To date, the hoped-for gains in children's learning that have been demonstrated elsewhere have yet to materialise – a fact that is widely attributed to the relatively poor level of staff pay, status and training of the early years workforce. Particular concern has been expressed about the low level of staff competency in literacy and numeracy and lack of preparedness to work with children with special educational needs and disabilities (Nutbrown 2011). The current proposed response is to introduce a minimum requirement of upper secondary (level 3) qualifications by 2022.⁵ It is striking both how modest an ambition this is – especially compared to high-performing systems such as Finland, where early years staff are trained and qualified to the same Masters level as other teachers – and also how uncertain it remains that even this low threshold will be achieved at a time of continuing fiscal austerity. The important lesson here for all phases of education is that a system cannot achieve excellent outcomes, particularly for the most disadvantaged students, without adequate investment in professional-level qualifications, training and employment conditions for the workforce.

The second main plank of the Government's strategy is the introduction of a new Pupil Premium targeted at 'disadvantaged children' (worth an extra £900 per pupil per annum, with total funding rising to £2.5bn each year in 2014–15), aimed at securing basic skills and meeting the wider learning needs of low-attaining pupils from deprived

4. Official impact assessments have anticipated considerable long-term benefits, including increased lifetime earnings from improved attainment at the end of schooling, amounting to an estimated net value of £1.6bn to £2.5bn between 2013 and 2022.

5. Over recent years the proportion of staff with an upper secondary (level 3) qualification has grown to approx. 65 per cent in England, whereas those with a first or higher degree are still a tiny minority (approx. six per cent).

backgrounds.⁶ With scrutiny from the Ofsted inspection regime, schools are under pressure to show that they are using their Pupil Premium grant wisely – including referring to the latest evidence on ‘what works’ to narrow the gap in pupil outcomes. Although significant money is being invested in new research through the Education Endowment Foundation (EEF 2011), the missing link is that teachers do not necessarily have the support network to collaborate and test new ideas and revise practice accordingly. Without a research infrastructure of this kind, it is likely that the EEF investment will prove fruitful, but not transformative.

Maximising Post-16 participation

Maximising participation in education, training and employment for those aged 16–24 is a particular priority at the present time, when young people have been hardest hit by the recession, and policy-makers are anxious to prevent the well-documented ‘scarring’ effects of long-term youth employment (Gregg 2004). From September 2013, a new requirement for those aged 16–17 to continue in education and training has come into effect, extending to age 18 from 2015. By ‘Raising the Participation Age’ (RPA), the government aims boost attainment of lower and upper secondary qualifications (level 2 and 3), based on evidence which shows that young people without level 2 qualifications who continue in full-time education are four times more likely to attain this level by age 18, compared to those who go onto a job without training. Whilst the policy may lead to a small increase in the participation rate (it already being fairly high, at approx. 85 percent for those aged 16–18), the main concern is whether it will produce any substantial improvements in the *quality* of teaching and learning outcomes for lower-achieving students. This is a particular worry at a time of limited resources, when the ‘unit cost’ for continuing students has been cut, making it harder for colleges to invest in specialist, expert provision for the young people who have yet to secure the basics in literacy and numeracy.

The Government’s employment and skills strategy is underpinned by a £1bn Youth Contract, which aims to provide 410,000 new work places for 18 to 24 year olds over three years from April 2012, including a mixture of wage subsidies, work experience placements and employer incentives to take on young apprentices. However, research suggests that this more diffuse package of employment support, which offers lower levels of resource per person to a higher number of unemployed young people, is unlikely to achieve better outcomes than its predecessor strategy (Gregg 2009). This poor prognosis appears to be born out in reality: all wage subsidy schemes have suffered from low take-up from employers and high levels of ‘deadweight’ (ie helping to fund jobs that would have been created anyway). Outcomes from the Work Programme have been particularly disappointing, partly due to the poor state of the economy, with only 3.4 per cent of young people referred to the scheme in its first year (fewer than 6,000 out of 240,000) finding sustained employment (LGA 2013).

6. ‘Disadvantaged pupils’ are defined as those known to be eligible for Free School Meals (FSM) or who have been eligible for FSM in the last six years, children who have been continuously looked after for six months and children whose parents are currently serving in the armed forces.

The missing link is that teachers do not necessarily have the support network to collaborate and test new ideas and revise practice accordingly

3. Enhancing vocational teaching and learning

The current dearth of research on vocational pedagogy urgently needs to be addressed

Improving the quality of vocational teaching and learning is a second key priority. The education and training arrangements for VET teachers and trainers urgently need to be strengthened, from initial teacher training through to continuing professional development, including developing the role of ‘dual professionals’ (Robson 1996, CAVTL 2012). Vocational teachers and learners require professional, managerial and organisational support to develop their dual identities as occupational specialists and pedagogical experts – and to keep both types of expertise up to date. The need for a ‘two-way street’, based on genuine collaboration between FE providers and employers is particularly pressing here, since vocational teachers cannot keep their occupational expertise up to date without access to real-world learning – which depends upon employer engagement to secure relevant placements (CAVTL 2012). Worryingly, when the Institute for Learning recently reviewed provision for CPD in FE colleges it found no evidence of a provider that routinely sends vocational tutors into industry for updating (IfL 2012).

In terms of strengthening the pedagogical expertise of vocational teachers, problems arise due to the under-researched and under-theorised nature of vocational pedagogy (Lucas *et al.* 2012). The current dearth of research urgently needs to be addressed, through a systematic programme of research to investigate the effectiveness of different models and approaches. In light of which, the Commission’s proposal to establish a National VET Centre with responsibility for research and development is highly welcome, if long overdue. With sufficient backing and resources, such a centre could develop regional networks ‘to showcase and experiment with new ideas for excellent vocational teaching and learning’, including research into the ‘optimal use of learning technologies’ (CAVTL 2013, p. 31). But as the example of introducing the Pupil Premium into English schools demonstrates, even a well-resourced R&D Centre cannot alone ensure that tried and tested ideas are taken up, interpreted and adopted effectively. This depends on building much broader and deeper organisational capacity for research and innovation, to embed the principles of enquiry-based teaching, learning and leadership.

4. Building collaborative and innovative capacity

The government has taken steps to encourage collaboration: for example, through a new ‘Innovation Code’ and a new ‘Growth and Innovation Fund’, providing co-investment to encourage employers to collaborate within their supply chains, business clusters and with FE providers, to find innovative ways of removing barriers to skills (BIS 2011). Whether or not such grants are taken up – and used effectively – will largely depend on the role of local stakeholders including Local Authorities and Local Enterprise Partnerships (LEPs). Local councils have an important role in helping to broker forms of employer engagement and reduce the mismatch between training courses and local jobs, eg by creating apprenticeships targeted at specific local growth sectors (LGA 2013). However, on-going cuts to local authority budgets are making it difficult to carry out this role, while the pressure of meeting individual targets can make it difficult for organisations to work together effectively.

Local councils have an important role in helping to broker forms of employer engagement and reduce the mismatch between training courses and local jobs

The creation of strategic partnerships and alliances is also being actively encouraged through wider government policy, with a plethora of new governance and organisational structures rapidly emerging, including federated models, mutualisation and social enterprise hubs and strategic alliances between universities, FE providers and other partners (BIS 2012). At the same time, sweeping changes to the school system through the third wave of ‘Academisation’ is ushering in a whole host of new relationships with businesses, charities, universities and other partners (DfE 2010). Within this highly diversified (and arguably fragmented) system, there are some emerging examples of innovative practice, such as the introduction of University Technical Colleges (UTCs),⁷ specialising in technical subjects such as engineering and construction, whilst integrating learning with wider skills such as business and enterprise. Also of note is the model of enquiry-based learning being followed by the growing number of new Studio Schools,⁸ (including inspiring partnerships such as the Space Studio Banbury, sponsored by the National Space Centre), in which students work on enterprise projects commissioned

7. University Technical Colleges (UTCs) are technical academies for 14- to 19-year-olds. They have university and employer sponsors and combine practical and academic studies.

8. Studio Schools are innovative schools for 14- to 19-year-olds, backed by local businesses and employers, which often have a specialism, but focus on equipping young people with a wide range of employability skills and a core of academic qualifications, delivered in a practical and project-based way.

All schools and colleges will need to experiment with original approaches or become early adopters of cutting edge practice elsewhere

externally (such as a health report for a local hospital or a business brief for a local employer), with the aim of creating learning that is authentic and integrated into the local community.

While these programmes are in their infancy, established models such as High Tech High in San Diego, a partner of the Studio Schools Network have demonstrated considerable success in using hybrid learning to stimulate innovative solutions amongst students and staff. What is striking about such examples is how much broader and richer the curriculum can be for students when they are given the chance to take on real-world challenges and come up with innovative solutions to problems, rather than focusing on rote memorisation of concepts.

Whereas ‘islands of innovation’ may emerge within existing systems, the education system of the future will need to develop a systemic capacity to innovate. As Michael Barber expresses it: ‘In essence, education systems need to think like the ‘lean start ups’, becoming ‘more adept at generating, identifying and scaling innovation internally’ (IPPR 2012). All schools and colleges will need to experiment with original approaches or become early adopters of cutting edge practice elsewhere, so that they can get better at responding to changing needs more quickly than ever before.

In industry, different phases of product development tend to be highly polarised, with a high skills trajectory during the R&D, design and launch phase, and then a period of exploitation and maturation requiring a low skills trajectory. Education is fundamentally different in nature: the realities and complexities of teaching and learning in diverse settings for diverse populations do not allow for an easy dichotomy between a high-skilled innovation phase and low-skilled implementation phase. It follows that *all* educators need to be involved in testing, experimenting, monitoring and refining their own practice in line with the findings from external research and their own enquiries. Even when robust evidence exists about ‘what works’ – there is always a need for educators to consider whether what worked *somewhere else* is likely to work in their own setting – and then to test whether it actually does work as intended (Cartwright and Hardie 2012).

The challenge then is how to integrate this learning into the wider system – without falling back into the trap of thinking that ‘best practice’ can be neatly packaged up and prescribed to teachers in other settings. Changing teaching practice in ways that have a significant impact on student outcomes is not easy. A common scenario is one where, ‘educators end up trying to implement innovations that they do not fully understand in organizations that do not fully support their efforts’ (Guskey, cited in Timperley *et al.* 2007, p. 12). Successfully developing and sharing innovative ideas across organizations depends on achieving the right balance between innovation and consolidation. At a policy level, staying power is needed so that priorities do not continually shift to the ‘next big thing’, undermining the sustainability of changes already under way.

Conclusions

To be truly innovative and ‘world class’, the system of the future needs to learn more from integrated models of vocational learning

Ensuring that every child and young person achieves a broad and rich set of skills, knowledge and capacities calls for a significant re-imagining of the role of educators and the functioning of the education system in the 21st Century. The important lesson for all phases of education is that a system cannot achieve excellent outcomes, particularly for the most disadvantaged students, without adequate investment in professional-level qualifications, training and employment conditions for the workforce. But transforming the system demands even more than excellent teachers: it depends on genuine collaboration to generate new ideas, inspired by real-world problems and solutions, and to test and refine new learning models in practice. While policy-makers can offer grants to encourage business engagement and find more ways to cut red tape, none of this is sufficient to bring about a transformation in the culture of education and learning. To be truly innovative and ‘world class’, the system of the future needs to learn *more* from the integrated models of learning that are starting to flourish in more vocationally-oriented settings, whilst steering away from more rigid academic models that fail to capture the richness of human needs and capacities.

References

- Bamfield, L., Hallgarten, J. and Taylor, M. (2013) *No School an Island: the Suffolk Education Inquiry final report*, London: RSA.
- Barber, M. *et al.* (2012) *Oceans of Innovation*, London: IPPR.
- Cartwright, N. and Hardie, J. (2012) *Evidence-based Policy: A Practical Guide to Doing it Better*, Oxford: OUP.
- Cedefop (2011) *Vocational education and training is good for you: The social benefits of VET for individuals*, Cedefop Research Paper 17, Luxembourg: Publications of the European Union.
- Commission on Adult Vocational Teaching and Learning (CAVTL) (2013) *It's about work... The summary report of the Commission on Adult Vocational Teaching and Learning*: Learning and Skills Improvement Service (LSIS).
- Department for Business, Innovation and Skills (BIS) (2010) *Skills for Sustainable Growth*, London: BIS.
- Department for Business, Innovation and Skills (BIS) (2011) *New Challenges, New Chances: Further Education and Skills System Reform Plan: Building a World Class Skills System*, London: BIS.
- Department for Business, Innovation and Skills (BIS) (2012) *Professionalism in Further Education: Final Report of the Independent Review Panel, Established by the Minister of State for Further Education, Skills and Lifelong Learning*, London: BIS.
- Department of Business, Innovation and Skills (2011) *Returns to Intermediate and Low Level Vocational Qualifications*: BIS Research Paper Number 53.
- Department of Education (2011) *Wolf Review of Vocational Education: Government response*, London: DfE.
- Department of Education (2012) *School funding reform: Next steps towards a fairer system*, London: DfE.
- Department of Work and Pensions, Department of Education (2011) *A New Approach to Child Poverty: Tackling the Causes of Disadvantage and Transforming Families' Lives*, London: HM Government.
- Education Endowment Foundation (2011) *EEF Evaluation: A Cumulative Approach*, available at: <http://educationendowmentfoundation.org.uk>.
- Foster, A. (2006) *Realising the Potential: A Review of the Future Role of Further Education Colleges*, London: DfES.
- Gregg, P. and Tominey, E. (2004) *The Wage Scar from Youth Unemployment*, CMPO Working Paper Series No. 04/097, February 2004, Bristol: CMPO.
- Gregg, P. (2009) 'Job Guarantee: evidence and design', *Research in Public Policy*, Issue 8, Summer 2009, pp. 16–23.
- Halpern, D. (2010) *The Hidden Wealth of Nations*, London: Polity Press.
- HM Government (2011) *Building Engagement, Building Futures: Our Strategy to Maximise the Participation of 16–24 Year olds in Education, Training and Work*, London: DfE, BIS and DWP.

- Howard-Jones, P. and Washbrook, E. (2010) 'The Timing of Educational Investment: a Neuro-Science Perspective', *Developmental Cognitive Neuroscience*.
- Institute for Learning (2013) *IfL Research to Inform the Commission on Adult Vocational Teaching and Learning*, London: IfL.
- Jacob, Anna M. (2011) Benefits and Barriers to the Hybridization of Schools, *Journal of Education Policy, Planning and Administration*, 1(1): 61–82.
- Lent, A. (2013) *The irresistible rise of the Venturist*, London: RSA.
- Lucas, B. (2012) *How to teach vocational education: a theory of vocational pedagogy*, Centre for Real-World Learning.
- Local Government Association (2013) *Hidden Talents II: re-engaging young people, the local offer*, London: LGA.
- Marmot Review (2010) *Strategic Review of Health Inequalities in England Post 2010*, London: The Marmot Review.
- National Audit Office (2012) *Delivering the Free Entitlement to Education for Three and Four Year Olds*, London: The Stationary Office.
- National Equality Panel (2010) An Anatomy of Economic Inequality in the UK: Report of the National Equality Panel, CASE Report No. 60, London: Government Equalities Office and Centre for Analysis of Social Exclusion.
- Nutbrown Review (2012) *Foundations for Quality: The independent review of early education and childcare qualifications Final Report*, Runcorn: Department of Education.
- Pring, R. (2004) *Philosophy of Education: Aims, Theory, Common Sense and Research*, London: Continuum Studies in Education.
- Pring, R. (2009) 'Another Reform of Qualifications – But Qualifying for What?' *The Political Quarterly*, Volume 84, Issue 1, pp. 139–143, January-March 2013.
- Roberts, Y. (2009) *Grit: The skills for success and how they are grown*, London: The Young Foundation.
- Robson, J. (ed) (1996) *The Professional FE Teacher*, Aldershot: Avebury.
- Spencer, N., Rowson, J. and Bamfield, L. (2013) *Applying Behavioural Insight to Narrow the Socio-Economic Attainment Gap in Education*, London: RSA.
- Sylva, K, et al. *The Effective Provision of Pre-School Education (EPPE) Findings from the Pre-School Period*, London: DfES / Institute of Education, University of London, 2003.
- Schleicher, A. (2012) 'Knowledge and skills are infinite – oil is not', *Education Today: OECD Global Perspectives on Education*, March.
- Schleicher, A. (2012) *Skills matter: Developing an OECD Skills Strategy*, Paris: OECD.
- Timperley et al. (2007) *Teacher Professional Learning and Development: Best Evidence Synthesis Iteration (BES)*. New Zealand Ministry of Education.
- Wright, J. et al. (2010) *Employability and Skills in the UK: Redefining the debate*, London: The Work Foundation.
- Wolf, A. (2011) *Review of Vocational Education – the Wolf Report*, London: Department of Education.

The RSA: an enlightenment organisation committed to finding innovative practical solutions to today's social challenges. Through its ideas, research and 27,000-strong Fellowship it seeks to understand and enhance human capability so we can close the gap between today's reality and people's hopes for a better world.



8 John Adam Street
London WC2N 6EZ
+44 (0)20 7930 5115

Registered as a charity
in England and Wales
no. 212424

Copyright © RSA 2013

www.thersa.org

Cover Image: Posted (Ark School, Service Children's Education for RSA Area Based Curriculum project)
By David Crausby, commissioned by Joy Harris, Arts Consultant, Service Children's Education

Designed by www.soapbox.co.uk