

Skills and Innovation in Modern Workplaces

by Robert Taylor



High Road/Low Road: Skills and Innovation in Modern Workplaces

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THE NEED TO CREATE A MORE SKILLED WORKFORCE for employment in high performance workplaces producing high quality/high value products and services has become an important priority for Britain's policy-makers. The government speaks of us living through a new era for skills and productivity improvement. Lord Sainsbury, the minister for industry, is giving particular attention to the need for companies to train and innovate if they hope to compete effectively in the future. "Major advances in science and technology mean that we have the opportunity to take advantage of our outstanding science and technology base and compete on the basis of our knowledge, creativity and skills", he explained in March 2003. But Lord Sainsbury added that the key to genuine improvements in innovation lay through the encouragement of more skills training among employees, especially in the new advanced areas of information and telecommunications technology. The government is strongly committed to the modernisation of the country's education and training system so that it can become more sensitive to the wider needs of industry. Raising the level and value of formal educational qualifications is seen by policy-makers as a necessary objective in order to improve competencies at work and encourage more innovation and creativity.

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The official emphasis on skills and innovation also reflects an apparent determination to close the continuing productivity gap that has existed between Britain and the country's main industrial competitors on global markets - the United States, France and Germany - for most of the past century. It has been estimated that the existence of poor skill levels among a sizeable proportion of the workforce not only accounts for up to a fifth of that productivity gap but also must share a responsibility for the country's comparatively low performance in levels of innovation and inadequate capital investment. "The productivity gap is explained to quite a large extent by the skills gap. Improving skills could help to narrow that gap", explains Christopher Duff, chief executive officer of the recently formed Sector Skills Development Agency.

A May 2003 paper commissioned by the Department of Trade and Industry from Professor Michael Porter and Christian Ketels at the Institute of Strategy and Competitiveness at Harvard Business School, has drawn our attention to the familiar problems of how to improve Britain's competitiveness. As they explained: "On skills, the UK lags behind the United States in the share of high skill employees in the labour force and also has a slightly higher share of low skill employees. The UK has a significantly lower share of intermediate skill employees than Germany and France, while the share of high skill employees is roughly equal. The UK's labour force skill problem appears to be mainly a problem of



the current stock of employees; in terms of inflows from recent graduates the UK does not lag behind its European competitors or the United States.” (1)

A plethora of public government-funded organisations are now being mobilised to focus national attention on the urgent need to improve skills development and implement a programme to achieve this across both the manufacturing and services sectors of the economy. This includes the business-led Learning and Skills Council, the Regional Development Agencies and an eventual network of 25 Sector Skills agencies. The government has allocated substantial public finance to the promotion of applied research in science in higher education. In addition, a number of government departments are also now giving a high priority to skills formation and innovation strategies. The Treasury and the Cabinet Office are as much involved as the Department of Trade and Industry and the Department of Education and Skills in this endeavour.

The central importance of the government's commitment to the improvement in skills and innovation cannot therefore be under any doubt. There is an undoubted sense of urgency behind this, reflecting a wide official recognition of the intractable nature of the productivity and performance problems that goes a long way back into our industrial history. Over many generations Britain has simply not given sufficient priority to the development of training, especially of workers in the use of transferable, intermediate skills that are now believed to be increasingly necessary for the success of modern companies. “Too many firms today are trapped in a low skills equilibrium where they are competing on price in low value added product sectors and demanding low skilled, low cost labour”, Lord Sainsbury has warned. But in the face of the globalisation challenge and substantial advances in science and technology in advanced market economies he believes that Britain's firms will have to raise their efforts and move decisively into the production of high value/high quality goods and services and compete in markets where such products are in demand.

The British government is especially keen to press its case for the greater promotion of skills training and innovation at the European Union level. At the Lisbon summit conference of European heads of government held in March 2000 all agreed that they should commit themselves to the strategic objective of transforming Europe “into the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion by 2010”. The Prime Minister, Tony Blair is committed to champion that laudable objective. Both he and his Chancellor Gordon Brown argue constantly that a skills and innovation agenda must form a

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vital part of the wider economic reform programme of liberalisation and deregulation that European Union countries must learn to embrace if they hope to succeed in competing effectively with the United States on world markets. In a paper on economic reform submitted by the Treasury to the European Commission in February 2003 the case was argued forcefully that the time was ripe for a boost in “skills, employment and labour market flexibility” alongside the introduction of research and development frameworks to promote innovation and encouragement of more “robust” regional policies.

Nor is it just at the level of the wider political economy that the urgent case for greater skills and innovation has become almost overwhelming and unquestioned among public policy-makers in Britain. As the 2002 official Skills in England survey has argued: “There is now a wealth of evidence that demonstrates the acquisition of skills by either individuals or employers is associated with higher earnings, increased productivity and greater job security. Civil society appears to benefit from a more educated population, much as high-minded nineteenth century utilitarians like John Stuart Mill hoped”. The business case for more use of skills and innovation is also seen as overwhelming in order to achieve better workplace performance and higher profitability. The intractable persistence of apparently key skills shortages in many sectors and across regional labour markets as obstacles to growth has also strengthened the case for giving a higher strategic priority to public action on skills and innovation. In the latest skills survey nearly a quarter of all companies employing more than a million workers between them reported that their labour forces were not as skilled as they needed to be for improved business performance. As many as eight per cent of employers also reported that they were suffering from skill labour shortages, amounting to a deficit of 100,000 jobs across the country. This is a rather familiar and depressing picture of the condition of labour markets in Britain. Despite praise for their alleged flexibility and the lightness of their regulation they still fail to respond effectively to the conflicting pressures of supply and demand.

Up until now much of our national public policy debate on skills and innovation in Britain has aroused little genuine controversy. It is apparently self-evident that the country needs to commit itself to the development of a high skills/high performance economy if it hopes to survive and prosper in the harsher, more unforgiving competitive world of globalisation. The only serious question at issue often appears to be what volume of financial resources are required in order to achieve the objective and the proportion of financial input individual employees and companies should contribute to that end from their own resources.

Under the European Union's economic reform agenda, the main emphasis has so far been concentrated on the need for a modernisation of employment services to increase the supply of skilled workers. The quality of individual employee performance has therefore enjoyed very much the focus of national attention in the public programmes which have been designed to stimulate innovation and learning in the world of paid work.

But we need to reassess the state of the current discussion about future skills and innovation needs and question some of our underlying assumptions and public policy prescriptions. One crucial element has so far been missing from this important debate. No serious attempt has yet been made to relate the apparently self-evident need to promote skills and innovation to the actual internal modernisation of companies and the way in which jobs are being organised or restructured in existing and new workplaces. The reform of workplace institutions as the strategic means to ensure the improvement of employee skills and innovation has so far received surprisingly little attention from the policy-makers in Britain. The approach up until now has been almost entirely dominated by the thinking of supply side and neo-liberal economists who are concerned almost exclusively with the introduction of measures to enhance the volume and quality of skilled workers in the labour market outside the firm and who tend to ignore or play down the significance in the nature of the demand in our workplaces for the kind of skills that employers say they need.

This is why the research papers presented at an Economic and Social Research Council conference in April 2003 at Cumberland Lodge on skills, innovation and performance, are of such potential importance. Taken together as a whole they tend to cast widespread doubt over the focus of the current public policy debate. In assembling researchers from the Future of Work Programme, the ESRC Centre on Skills, Knowledge and Organisational Performance and the ESRC Centre for Organisation and Innovation, the gathering was able to benefit from a valuable exchange of information and opinions from a wide and diverse range of knowledge and expertise. The following report does not cover every aspect of the conference. It concentrates instead on those particular findings that point in the direction of our need for a much closer analysis of workplace realities in the discussion about the nature of skills and innovation. As so often in Britain's world of work, the rhetoric belies what is actually going on in firms and other organisations. The language of the government and industry about the importance of transforming the country into a high skill information and knowledge economy may be inspirational but the gap between its perceptions and the reality we face so often across many

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workplaces remains very wide. Indeed, it is not always apparent that the government is actually concerned to raise the actual quality of labour and skills in a genuine commitment to quality and excellence. Often the Treasury, in particular, seems much more preoccupied with the implementation of a national employment strategy that simply wants to ensure everybody works and should hold down a paid job, irrespective of whether it is dead-end and low paid or requires enhanced skills with high pay along and offers genuine career opportunities.

The primary lesson to draw from the new findings is that Britain's productivity problem and the country's future as the centre of innovation would be immeasurably improved if we focused much more of our attention than we are doing at the moment on the nature of workplace organisational change and not simply on the ups and downs of the external labour market, not so much on individual employee needs and more on the framework of institutions within which paid work is being organised. Too much effort is perhaps being devoted to the encouragement of individual innovators and self-help initiatives and incentives, on the development of a pro-activist state designed to equip people with the necessary skills and education and not enough on an analysis of the underlying structures in the workplace that can often obstruct or at the very least slow down the pace of progress.

The main section of this report will outline many of the crucial insights and arguments that were made by participants at the Cumberland Lodge conference on this fundamental issue. A short conclusion will then spell out the public policy implications of the findings, which draws on some European experiences, in the hope that this may stimulate further public debate in a policy area where we have lacked sufficient constructive dialogue for far too long.

From the outset, however, two general observations need to be made. Firstly, it is highly questionable whether the current, almost exclusive, emphasis on the quality of labour supply outside the firm is sufficient to meet the complex needs of creating an information-based economy, and secondly, we must try to integrate any future skills and innovation strategies within the wider context of the changing dynamics that exist both inside our workplaces and perhaps above all in the strategic thinking of employers and managers who want to compete and modernise.

The Importance of Organisational Change

"POLICY DEBATES TEND TO REDUCE COMPLEX AND CONTENTIOUS concepts to simple, unproblematic (if vaguely specified) certitudes. This tendency is bolstered by a

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series of more or less implicit assumptions which act as the means by which awkward problems can be neatly sidestepped". This acerbic observation was made by Dr Ewart Keep and Ken Mayhew from the ESRC's Centre on Skills, Knowledge and Organisational Performance and it ought to be heeded by the policy-makers. (2) As they pointed out to the Cumberland Lodge conference, while nobody can doubt the government's commitment to improve the quality of the supply of labour with the provision of more opportunities and greater access to higher levels of skill training, its efforts are being hindered by the bewildering range of public bodies seeking to offer those training opportunities. "There is a real danger that what is an already very complex and relatively unstable vocational education training system will become even more cluttered with a multiplicity of short-lived schemes, initiatives and wheezes sponsored by competing groups", they argued, pointing out that there are currently no less than eight different types of pilot scheme aimed at boosting the take-up of adult training places. Keep and Mayhew warn that the "comprehensibility of our vocational education and training system has become more of a problem - for parents, trainees and employers - and this is liable to worsen unless some restraint is exercised". The fragmentation of responsibility inside government is not only diffused across many departments and public agencies which leads to an inevitable confusion and division as well as duplication of effort but it also means the lack of a coherent policy response to workplace realities. Despite the constant calls for evidence-based policy formation, the interaction between empirical research and policy-making remains extremely problematic in skills and innovation. Keep and Mayhew believe there is an obvious danger this situation will not get any better in the near future but could even worsen. As they pointed out in their paper: "It is unclear how wide, deep and well-founded is the knowledge and evidence base of some of the new official and quasi-official entrants into this field of policy".

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But the problems of skill formation and innovation go far deeper than the duplication and over-lap in policy implementation in boosting the supply of suitably trained employees in the labour market. More importantly, they draw our attention to the limited extent to which most British employers and managers are trying to create or develop high performance workplaces. Lip service may be offered to such an inspirational objective by many companies but too often the reality looks very different. Keep and Mayhew point to what they see as "an unduly high proportion of UK companies that produce at the low end of product specialisation". They conclude, mainly from the evidence contained in the official National Skills surveys, that few firms are really giving a top priority to the need for the creation of a high skills/highly qualified workforce because their basic business activities do not require them to do so. Indeed, we can draw upon a formidable array of evidence, from the workplace industrial relations surveys to

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those carried out among employees and management under the ESRC's Future of Work Programme, that reinforces their opinion. Most employers devote insufficient attention to what are often described as people management issues and in particular to developing the skill capabilities of their employees. As they explain: "Employee relations systems, work organisation and job design are all ultimately third order issues. They are normally, to some extent, dependent on what the organisation aims to deliver and the structure and control systems it has developed to deliver that offering".

It is no exaggeration to suggest that a national consensus has emerged from the research findings that indicate human resource management techniques are seldom used in general in firms either in a planned or ad hoc way. This applies, in particular, to employer attitudes to skills training. But this is perfectly understandable. As long as companies can continue to prosper or even merely survive in pursuit of low cost /low value activities, there is little incentive for them to modernise by changing their product range or improving the quality of their services. "Unless and until we can convince more organisations within our economy to aim to produce higher specification goods and services and to change the way they engage with their employees, organise work and design jobs, our chances of becoming anything resembling a high skills economy (still less society) are slender", Keep and Mayhew conclude. They argue persuasively that it is the weakness of Britain's limited employment regulations and the structure of demand that makes it both possible and even sensible for companies not to choose to adopt a high road approach to business performance but to continue to stay on the low road. The fundamental reason why enterprises fail to accept the high road model to skills and innovation stems not only from the economic environment but the traditionally autocratic and conformist management culture within which they operate. As Keep and Mayhew point out, in many private service organisations the market is exclusively domestic so they face no exposure to the kind of international competitive pressures that can make an impact in manufacturing and force industrial restructuring.

However, Keep and Mayhew believe that something can be done by the policy-makers to remedy this seemingly basic and intractable problem. They argue that new forms of public intervention are required if Britain stands any prospect of becoming a predominantly high skills, knowledge-based economy. Merely chanting the mantra - training, training, training - will not prove sufficient. But whether the government would be interested in even examining their particular policy recommendations must be questionable in the current climate of official opinion. In fact, what they have to suggest should not be dismissed out of hand. What is clear, however, is that it would involve giving much stronger public support to

businesses in the restructuring of their product market strategies towards the provision of high value added goods and services through the selective use of public sector purchasing and the encouragement of employers to pursue a quality of working life agenda that links the drive for new job re-design to more innovative forms of work organisation. Inevitably this involves more worker participation and skills enhancement. In addition, industry clusters and supply chain networks should be more actively encouraged as a means to disseminate the value of high performance workplaces more widely within the business community. It would also be used as the exemplar of best practice, consumers would be encouraged to become more discriminating in their demands and convince firms of their need to move from the low to the high road in the provision of higher quality goods and services. Tax incentives might also assist in the development of organisational change by encouraging the improvement of workplace behaviour while the imposition of a much higher statutory national minimum wage might encourage firms to raise the existing skills value of their workforces and place a stronger emphasis on the need to retain them. As Keep and Mayhew admit, these policy recommendations amount to a "fairly radical agenda, at least by UK standards, though one that would be recognised in much of northern Europe". But they are surely right to argue we must develop a much more concerted and wide-ranging strategy that stimulates a transformation in management attitudes to workplace organisation. The alternative is really to do nothing. As they put it: "We are then left with the dawning realisation that the kind of world advocated by the evangelists of the skills revolution will simply not happen, at least for the majority of firms, without sustained support and intervention and the possibility of continuing to pursue supply side policies that are both expensive and ultimately ineffective but which are the only kinds of policies that are believed to be feasible."

Keep and Mayhew may not be thanked for what is an often bleak but realistic analysis, even if it is based on a thorough examination of a wide range of research evidence. Policy-makers have been too impatient in their search for short-cut solutions to the skills and innovation question. The high skills vision, Keep and Mayhew explain, "tends to shimmer like a mirage on the distant horizon and it has lacked any sense of detailed precision". What is particularly challenging about their approach is its persuasive central argument. We really need to shift our emphasis away from a rather exclusive concentration on increasing the supply of skilled workers available in the external labour market with no direct relevance to particular demands in what is a still predominantly low skill production system. Instead, we must launch a more determined policy drive to actively encourage more firms to take the high road approach to skills and innovation. In countries like Sweden and Finland an integrated industrial and employment policy has

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proved highly effective, especially in encouraging the wider use of information technology and a development in team methods of production. But this has involved ensuring the quality of the job question is moved into the mainstream of management thinking about new forms of work organisation. Skills and innovation at work cannot be taken in isolation. They must form an integral part of what would be a much wider approach to organisational change that is inclusive enough to ensure employees themselves are an active and not a passive influence in what is happening.

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A presentation from Professor Francis Green at the University of Kent into some of the findings from the 2001 National Skills Survey at the conference also provided important insights into the consequences of concentrating too much on the supply side of the skills and innovation question. ⁽³⁾ There is widespread evidence to show that employers are increasingly demanding higher formal educational qualifications from potential recruits for the jobs they have on offer. The proportion of degree-level jobs available in the labour market increased, for example, from 10 per cent in 1986 to 17 per cent in 2001. At the same time the number of jobs on offer requiring no formal qualifications fell from 38.6 per cent in 1986 to 26.5 per cent in 2001. These figures suggest we are creating a much more skilled and educated workforce in the labour market. At the same time we find fewer jobs are being created that require a cumulative training time of less than three months. The proportion declined from 27.1 per cent in 1986 to 20.2 per cent in 2001. But Green also points out that we are experiencing much more individual mismatch between labour demand and the suitable supply of workers. A rising proportion of them are "over-qualified" in terms of their educational qualifications for the kind of jobs they are doing. In 1986 30 per cent fell into that category; by 2001 the proportion had risen to 37 per cent. However, another important finding taken from a comparative analysis of the skills surveys since 1986 found that a declining number of employees are now enjoying personal influence and discretion over the tasks they are required to do in their jobs. They have a less effective say on how those tasks are done, how intensively they work and the standards to which they are expected to work. It should come as no surprise to learn that as a result of this we have seen a marked decline in levels of job satisfaction over time. In short, we may well be creating a more qualified workforce as a result of an expansion in educational requirements but we lack sufficient job opportunities to satisfy the supply.

Green's findings appear to be reinforced by the research of Professor Michael Rose at the University of Bath into the nature of skill. ⁽⁴⁾ His most important findings concern the relations between the level of educational qualifications achieved and those required for the jobs that workers are now performing.

Individuals who lack the qualifications now required in their jobs may have strong organisational attachments of loyalty and commitment because they lack formal competencies for the work they are doing. By contrast, for the over-qualified there is more evidence of job dissatisfaction and an understandable tendency for them to seek employment elsewhere in the labour market. But the overall picture again points to the emergence of a chronic mismatch opening up between supply and demand. It is impossible in the space available to do justice to the complexity of Rose's arguments. These can be read in his paper - *Education, Skills and Job Attitudes evidence for 1985-2001* - available from Rose at the University of Bath.

Research being carried out by the Policy Studies Institute and the London School of Economics provides us with further evidence of the importance of innovation in work organisation to the spread of skills in information and telecommunications technology. (5) The research concludes, if only tentatively, that a growing number of organisations may be entering a period in which the widespread use of information technology can enable them to become more internally flexible in the way they organise work. Earlier reports in this ESRC series have drawn attention to the impressive extent to which information and telecommunications technology is now being used at work and the substantial proportion of workers who are being trained in many of its uses. The latest PSI/LSE paper provides further, compelling evidence of the impact information technology is now making on work organisation.

The findings suggest that the use of information and telecommunications technology both requires and facilitates greater versatility at work but that formal training and job rotation schemes to achieve this are not needed except perhaps at the earlier stages of development. Dr Michael White and Professor Stephen Hill, the main authors of the paper, indicate that it may well be "that the technology itself, once established, makes it possible for individuals to acquire the additional skills to cover a wide range of tasks, with external supports". What is unquestionable is that information and telecommunications technology is making individual employees much more versatile and capable of carrying out an increasing range of skill functions in their jobs. But earlier findings from the LSE/PSI project suggest the existence of a digital divide with less opportunity for manual workers to learn and exercise those new information-based skills although their knowledge of information technology is substantial from the use of computer skills at home. The logic of the latest findings is to increase the capacity of organisations themselves to achieve greater internal flexibility in the deployment and use of their employees without the need to look to the external labour market for much substantial support. In addition, the impact of the new technology is helping to stimulate far more employees into pursuing their own

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internal career tracks in the firms where they work. The adoption of high skills on the job requires increased amounts of specific work based knowledge and skill. This means encouraging managers to foster and retain their existing employees. The growth of self-organised team working can also be associated with the arrival of information and telecommunications technology although the research found only a tenuous relationship exists between that technology and the greater use of work improvement groups. But the highest levels of information technology coverage do seem to be connected to the existence of stronger types of team organisation. In addition, the research found both information and telecommunications coverage and the growth of intranets are becoming conducive to more distance working, though that relationship looks stronger for those who work from home than for those involved in forms of teleworking, perhaps because the former type of work tends to be more flexible and partial and not regular and standardised.

A number of insights of relevance to the policy-makers can be drawn from these particular research papers. It is the obvious responsibility of firms to overcome the supply and demand mismatch but the evident growth of a more qualified workforce might suggest manpower constraints are not insuperable in adopting high road rather than low road approaches to skills and innovation. However, the most important conclusion from the analysis of skills formation is that modernising organisations are unlikely to make much progress if they pursue strategies that fail to relate their skill needs to the supply of labour available. It makes more sense to follow human resource management strategies that give a priority to retaining and motivating existing employees rather than seeking to take advantage of the flexibilities possible in the labour market outside the boundaries of the firm. High skill/high performance workplaces need qualified employees but also employees who are motivated and given discretion and autonomy over their jobs and their career prospects.

But research carried out by Professor Toby Wall at the Centre for Innovation and Change of Work at Sheffield University suggests we still have a long way to go in Britain in the empowerment of workers to improve their own performance. (6)

There may be a widespread agreement that it makes sense to devolve responsibility for organising and managing work to individuals or teams rather than concentrating decision-making solely in the hands of management. Indeed, such empowerment is seen as an important ingredient of human resource management. However, a study of senior management in 564 UK manufacturing companies employing more than 150 workers found limited evidence of much empowerment in practice. Indeed, less than a quarter of them reported that they empowered their employees, with more than 60 per cent of firms making no attempt to



introduce such methods of participation. Just-in-time production methods and total quality management techniques were found to be the commonest forms of workplace modernisation, followed by team-based working and the use of integrated computer-based technology. On the other hand, when senior managers were asked how effective worker empowerment was in meeting the company's overall objectives such as costs and quality, they said that it measured well against the other forms of workplace modernisation. In an international comparative analysis Wall found that such employee empowerment is far more common in most advanced market economies outside Britain, most notably in Australia and Switzerland.

In addition, further research into 80 small and medium-sized British companies found worker empowerment was effective in improving both productivity performance and profitability. Another survey of operators of robotic systems points to a significant improvement in output as a result of a shift from traditional forms of work organisation to employee empowerment. But the key question is where does empowerment work best in terms of improved productivity performance. On this Wall provides us with an interesting answer. It seems that the most satisfactory of outcomes is where the work requirements are variable due to changes in customer requirements and product design as well as variations in the reliability of the technology and raw material available. The more standardised and predictable the task the less evidence of any measurable performance gain from the use of worker empowerment.

Further research carried out by Professor Jonathan Michie at Birkbeck College management centre at London University and Dr Maura Sheehan from the University of Dallas in Texas reinforces the need for us to concentrate more on the importance of internal flexibility of labour inside firms to promote innovation and improved performance. (7) They point out that it is rather misguided of public policy-makers to praise the so-called flexibilities in the British labour market when they are referring to the growth of contingent forms of employment such as short-term contract work and part-time jobs. Moves towards lighter regulation and the encouragement of those kinds of labour - they argue - are more likely to strengthen existing managerial commitments to a low wage/low cost business model. Practices that promote more 'here today and gone tomorrow' jobs and 'hire and fire at will' recruitment of employees are simply not compatible with the creation of workplaces that want to enhance performance and produce high quality goods and services. The Michie/Sheehan paper shows that resorting to the use of such flexible labour does not enhance the effectiveness of business performance, especially when it comes to the promotion of innovation and quality production. Indeed, firms that rely on the use of external sources of labour for

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many of their operations for limited contractual periods are likely to give a much lower priority to skills training. A business priority that is determined primarily by cost may be more favourable to the use of flexible employment contracts but its emphasis on short-term gain is at the expense of strategic thinking for the future. The research findings suggest the workplaces that perform the best are those that fully integrate comprehensive human resource management techniques into their business operations. This involves the creation of stable and better motivated workforces that are loyal and committed and so more willing to embrace organisational change. It is enterprises that develop such strategies who are much more likely to devote internal resources to the promotion of skills and innovation, which in turn provides the opportunities for workers to use their skills effectively in their jobs. Michie and Sheehan insist that the high road approach contrasts favourably with the use of external labour by firms who want to pursue the so-called low road option. They conclude that it provides a “barrier to competitive success”.

The workplaces that perform the best are those that fully integrate comprehensive human resource management techniques into their business operations.

A paper from Professor Helen Rainbird, University College, Northampton and Dr Anne Munro, Napier University, provided evidence drawn from six case studies in the public services sector (three in National Health service trusts and three in local government) that look at the problem of raising skill levels among lower paid manual workers. (8) It reinforced the widely perceived view that many of them possessed greater formal educational qualifications than those required by their job. This was particularly true of younger workers. A case study of a sterilisation and disinfection unit found workers were able to rotate the tasks they have to do but there are severe limits to the levels of skills that are being used. As a result, no incentive exists for further training or career ladder opportunities. Another research project based on workers in a local authority housing department again found little scope for training or promotion in jobs that involved increasing levels of work intensification. What comes strongly from the overall findings is the dominance of cost considerations reflected in cuts in jobs and raising demands. The limits on resources makes it difficult to envisage practical ways of turning such public sector areas of low pay into workplaces of high quality and high value. As Rainbird and her colleagues explained: “An increased supply of qualifications and management systems which cannot address current business needs have little impact on their own or workers’ access to training and development and utilisation in the workplace”. But they also make an important and often neglected point - the narrowness of the collective bargaining agenda coupled with the manifest decline in trade union power have weakened the ability of workers to negotiate job redesign. It ought to be added that the rise of the new contract culture, with its intrusion of private sector commercial values into the provision of many public service functions, has further eroded the wider priority of raising skills and

encouraging innovation. But above all it is the constraints on the provision of resources that make it difficult for the public service sector to improve and utilise training opportunities. "Management systems designed to deliver under-funded services will ensure service delivery needs are met within budget but are unlikely to transform the demand for skill", Rainbird and colleagues argue. "Many jobs will continue to require few formal qualifications, with a limited scope for job enlargement or a greater use of skills". In their opinion, it is sensible for policy-makers to recognise this in the development of more modest and realistic skills and innovation strategies for manual workers in the public services.

Research presented by Professor Stephen Wood and Dr David Holman at the Institute of Work Psychology at Sheffield University into 142 call centres in Britain that employs an estimated 17,000 workers revealed a wide range of experiences in the use of human resource techniques by management, but it also found widespread and regular performance appraisals being carried out by regular call centre managers. (9) Up to 70 per cent of senior management questioned in the survey said they trained their own staff, while most added that they used regular individual performance appraisals, but the survey also discovered there was uneven evidence of quality improvement activities and limited allowance in job discretion at the surveyed call centres as well as widespread resort to performance work in the monitoring and appraisal. However, none of the senior managers said the call centres who employed them suffered from bad employment relations. But the diverse pattern of workplace performance also made it more difficult for the recruitment of highly motivated staff by the better employers in the call centres in terms of improved output. Unsurprisingly, workplaces with the higher rates of annual labour turnover were much more likely to suffer from the consequences of poor employment prospects. Low quit rates, on the other hand, pointed to provision of greater autonomy in the work, monitoring of skills and policies being pursued that reduced stress levels. Clearly it remains hard to generalise about work and jobs in the call centres, given the range of their activities and conditions of service in many areas of the country.

Public Policy Implications

IT IS ALWAYS DIFFICULT TO TRANSPLANT A PARTICULAR public policy from one country to another. But there is a growing amount of plausible evidence now available that suggests the evolution of government-backed workplace development programmes is of immense importance in dealing with the problems of raising skill levels and promoting innovation. Seven countries in the European Union are now pursuing such strategies, some - like those in Sweden, Norway and Germany - with tangible success. A paper was presented at the Cumberland Lodge conference from the

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Ministry of Labour in Finland which points to this new way in which public policy can be used effectively in workplace renewal. ⁽¹⁰⁾ Since 1996 the Finnish government has developed a workplace development programme of its own. Crucial to its success has been its close involvement from inception of the social partners - the centrally organised employer associations and trade unions alongside an enlightened state. The institutional consensus lying behind workplace development was seen as vital for the programme's credibility and success. But this is not a top-down approach. The responsibility for development has been placed on companies and their employees solving their own operative problems and not subjecting them to outside bureaucratic interference.

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However, the design of the programme seeks to focus on a comprehensive approach that links together the introduction of new technologies, the training of management, the enhancement of employee skills with quality of the working life and the improvement of working conditions and occupational health. As the paper explained: "The basis for this is the assumption that creating a supportive environment for continuous learning and development calls for a strategy of change, which advances simultaneously on a broad front and "a fit" between different work, organisational and human resource management practices within a company". In the Finnish case the linkage between research and workplace development is seen as crucial to the programme's success. Just as important, has been the commitment to full participation by workers as well as managers in workplace modernisation. It also helped to bring in outside consultants, educational institutions such as technical universities and research institutes and development agencies in the formation and implementation of workplace modernisation. The creation of quality learning networks from the integration of such groups has played a crucial role in sharing knowledge and developing trust inside and between companies. The existence of fairly strong social partnerships between employers and trade unions has undoubtedly helped to ensure the success of the programme in Finland and we have no comparable experience in Britain. Nevertheless, we need to take a closer look at how workplace development strategies are being implemented in other advanced European market economies which are committed to a skills and innovation agenda.

Germany provides us with some useful insights on ways of developing an effective strategy. Professor Gerhard Bosch from the Institute Arbeit und Technik in Gelsenkirchen raised some fundamental issues in his presentation to the Cumberland Lodge conference. ⁽¹¹⁾ The most important was his convincing argument that the improvement in overall educational attainment before entry into the paid labour force is the best means to avoid social polarisation between the classes and make income distribution more equitable and economically efficient.

Moreover, the higher the skill level attained, the higher the employment rate. Bosch underlined a key point that can be often overlooked. Most of the general skills, such as versatility in languages and mathematics, as well as the development of social intelligence, last a whole working life but basic vocational training and learning specific vocational skills do not. He suggested it was a myth to argue that workers should be prepared to change their occupation several times in their working life. But on the other hand, the rapidity of technological development made training based on fixed curricula and certificates was no longer viable. Instead, Bosch - arguing from the German experience - said that training has to be increasingly oriented in line with the needs of firms. This involved the need for what he described as "a pro-active, supply side approach of identifying future needs and translating them into the curricula".

He pointed to a number of bad practice examples of how lack of such training had ensured poor corporate performance. On Britain's railways only 207 workers out of a 200,000 strong labour force had received any national vocational qualifications in the first seven years after the network had been moved from the state to the private sector. But, as Bosch explained, the railways were franchised to operating companies on the basis of low cost, but the cheaper the bid the more likely training would be cut or given a limited priority. He suggested training costs needed to be taken out of competition and minimum training requirements had to be established in such contracts. In the British gas sector, privatisation led to a drastic fragmentation of the industry and the state has been compelled to fund the training after training budgets were slashed with a resulting drop in those being trained. In 1999 there were only 128 entrants to the industry and more gas installers are now over the age of 50 than under 35. In the American construction industry, the repeal of wage regulations in 10 states since 1979 and the fall in trade union density in that sector, has been paralleled with a cut back in training in order to win contracts, a decline in apprenticeships.

Bosch gave a number of good examples of the effective use of vocational training. Contrary to some British opinion, the famous German dual system has shown much more flexibility and accommodation to change than often supposed. It has been extended well beyond the traditional handcraft sector of the past to cover new occupational profiles in the service sector such as banking and insurance as well as manufacturing workplaces that use information technology. As many as two thirds of young Germans now complete a training course in the dual system, which is still run by the social partners - the employer associations and trade unions - who agree on standards and skill definitions. But Bosch pointed out that the occupational training system has benefited enormously from the pro-active collaboration between the social partners who agreed together in the

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modernisation of old occupations and creation of new ones. Workplace change in Germany is the sine qua non for the new skills and learning agenda. The joint approach has initiated an agreed programme of modernisation that has covered the inclusion of new technologies, teaching workers how to operate in teams, bringing a new emphasis on customer needs and introducing common basic training for over-lapping occupations. Bosch explained that four new information technology occupations have been established since 1996 in the system, which has created the conditions for optimal collaboration in work in the new sectors. These are IT electrician, IT specialist, IT system support specialist and IT officer. The social partnership approach has also proved to be a success in helping firms change their skill requirements, assisting them with job recruitment and analysing future skill demands in innovative areas of activity.

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The most impressive example, cited by Bosch, was the 2001 collective agreement reached on training in the engineering industry in Baden Wurttemberg. Under this, the social partners have agreed on the general principle that the pursuit of lifelong learning is the key for the future competitiveness of companies and the employability of employees. As a result of the agreement every worker has the right to a regular talk with his or her employer about their individual training needs. If this is accepted an individual training plan is drawn up and where there is a failure to agree the works council or a joint union/employer commission tries to help them reach agreement. The employer pays for all the training. After successful training, workers can then claim to use their newly acquired skills in their jobs. A joint social partnership agency has been formed that assists in the development of training for the semi and unskilled workers and in proposing new training schemes in response to structural changes in the engineering industry. Each worker with five year's job tenure is entitled to three years unpaid leave for training.

Bosch has also been impressed by the Danish vocational training system that is also closely linked to specific sector and company needs. First of all, basic training is offered in seven specific sectors that last from 10 to 60 weeks. If they succeed in reaching the required standard they then move on to the main programme that lasts from three to three and a half years with 60 weeks in vocational schools. This programme offers training in 90 specialisations but it is rigorously administered through modules and individual education plans. Part of the funding for this ambitious approach comes from employers themselves who contribute to a collective fund. This pays for the wages of apprentices, the vocational training of those who fail to get an employment contract, training abroad and support for regional labour mobility. The fund is run by the social partners - employers and

trade unions in common purpose - but local authorities are also closely involved in monitoring the programmes and approving the budget.

But the crucial public policy implication to be drawn from such examples in western Europe is that companies which are left to their own devices are under such cost competitive pressures from the outside markets that they are likely to cut back on their training needs in order to save money. Bosch argued that deregulated product and labour markets tend to produce substantial obstacles to the pursuit of a high road/high performance skills strategy. In his opinion, a mere expansion in state funding and a school based vocational training system is simply not a satisfactory alternative. The key to success, he argued, lies in ensuring that the demand for training becomes linked inextricably to the work organisation inside companies. Bosch pointed out, for example, that the forty-year old tradition of work humanisation and workplace modernisation in the Nordic countries was one of the driving forces that ensured the updating of vocational training practices. But this success stems from the close and energetic alliance between enlightened states and strong and cooperative social partners. In Britain such an arrangement is normally characterised as an obsolete and discredited way of achieving industrial change, but across much of northern Europe the existence of social partnership has ensured the success of vocational training programmes that are related to the realities of firms undergoing modernisation. Bosch pointed out that if employers with their associations and trade unions and employees shaped the training system according to their views and needs, skills enhancement and innovation are more likely to be accepted and implemented. Of course, we lack such social partnership institutions in the area of workplace change. But their active involvement at national, regional and sector level has not proved to be rigid or ineffective. On the contrary, the encouragement of networks and clusters of social partners along with educational bodies and regional development organisations might provide some answer to Britain's productivity problem. Michael Porter in his May 2003 Department of Trade and Industry paper alludes to this in the reasons he presents for suggesting UK companies have been slow to adopt modern management practices. He speaks of "the insufficient presence of institutions for collaboration in the UK economy". Perhaps this point may become the start of fresh research. What is rather surprising in the Porter analysis is the complete absence of any reference to the importance of workplace development and the role of employees, let alone trade unions or forms of social partnership, in raising skill levels and encouraging innovation. This blind spot is shared by Britain's policy-makers. But, as Porter also explains convincingly, the alternative is for companies to stay on the low road and rely on driving down costs and maximising efficiency to prosper and survive. After all, as he admits, "The

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weaknesses in the UK's infrastructure, science and technology system and labour force skills make it harder for companies to compete on innovation and unique value”.

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Too much of our current national debate in Britain has been concerned with the supply and quality of skilled labour. We have not given nearly enough attention to the needs of employers and the degree of commitment they are prepared to invest in the necessary process of workplace modernisation. As a result, there is an obvious danger that we will produce too many people who are unsuitably qualified for the complex demands of the new world of paid work. The resulting existence of a workforce unqualified in the requisite skills can generate obvious widespread job dissatisfaction. But there is another drawback that needs to be taken into account. Our contemporary approach also fails to encourage the growth of greater worker participation and genuine empowerment in job redesign and workplace decision-making. Indeed, we are seeing unfortunate signs of moves in the opposite direction in many sectors of workplace life with the erosion of employee autonomy and diminution of discretion by some managements who are introducing tighter controls and work disciplines through more surveillance, exacting time-keeping and work measurement.

Examining past, present and future changes in the UK labour market, Professor Peter Nolan and Gary Slater point out that the emphasis in practice on the production of low skill and low value products and services continues to remain a powerful one. (12) The barriers remain formidable to “the construction of a vibrant, technologically advanced and knowledge intensive workforce”. Moreover, the trouble does not just lie in the tenacity of past traditions that have given training and skill formation a low priority. The emergence of the so-called new economy is usually assumed to mean the creation of more information and knowledge workers, who are highly skilled and motivated, well paid and individualistic. But we have also seen a perhaps far larger growth in low skill, low paid jobs that are more insecure and stressful than the old ones. As Nolan and Slater indicate, “the fastest growing occupations include soft-war engineers and management and business consultants but also shelf-fillers, nursery nurses and prison officers”. The world of intangible inputs, of self-motivating innovators who are literally “living on thin air” is more a mirage than a reality. In fact, our new world of work reveals a wide diversity of jobs becoming available, many of which are labour intensive, monotonous and without career prospects. The future threatens to reveal an hour glass labour market. At the top will be the high flyers with well-paid, comfortable jobs on offer that provide autonomy and independence, and below will be the many more low paid, routine, dead-end

jobs servicing the post-industrial economy. The social inequalities and unfairness will remain and perhaps will grow in intensity with resulting frustrations and discontents.

The government argues that Britain enjoys a comparative advantage over its main competitors because it has a more flexible labour market. But if by this the Treasury means a more 'hire and fire' approach to recruitment and a minimum code of regulation to thwart the unilateral right to manage, it does not suggest much genuine commitment to the creation of high performance workplaces. Indeed, such flexibility is more likely to encourage firms to rely on low costs and low quality production as they each compete against one another by driving down prices on their goods and services. As Professor Porter has pointed out, Britain has a larger proportion of its workforce that is unskilled and unqualified than its commercial rivals. This is the inevitable result of having a flexible external labour market and lightly imposed minimalist regulation shaping most workplaces. This is why policy-makers need to explain if they are truly concerned to raise the quality of paid work and pursue the high road to skills and innovation. Present employment policies do not provide us with convincing evidence that this is the case.

The most important message that is highlighted by the current range of research into skills and innovation concerns what kinds of public policy are best able to improve performance and raise labour productivity levels. Too much of the present approach remains top-down, ad hoc and fragmented. It is over-managerial in its tone and substance and concerned primarily with the implementation of supply side external labour market measures. What is currently lacking is the development of a comprehensive skills and innovation strategy that is more in tune with the encouragement of workplace reorganisation and institutional change. This is why public policy-makers need to turn much more of their attention to the changing needs of workplaces and the actual structure and skills content of jobs. It means a greater integration of industrial strategy within what are becoming known in continental Western Europe as workplace development programmes. This does not mean we are or should return to the often failed or poorly conceived corporatist solutions of the past. But it implies placing the issues of skills and innovation inside a much wider agenda of workplace change than we appear to envisage anywhere at the moment. Thirty years ago the humanisation of work and the cause of industrial democracy were the subjects of intense public debate and research. At that time they were seen as necessary employment responses that were required to accommodate or at least utilise the upsurge in labour militancy that appeared to characterise so many workplaces across the

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western industrialised world. The resulting policy prescriptions were focused mainly on how to resolve or appease worker discontent and put an end to the existence of a so-called democratic deficit in the workplace. But such approaches at that time paid insufficient attention to the business imperative of commercial success, to the discriminating demands of both product and consumer markets and above all to what the strategic objectives of firms ought to be. Today we are going through what often looks like a permanent and continuous upheaval in the world of paid work, driven partly by technological change but also by volatile consumer preferences and intense competition. We need to place our future skills and innovation agenda in this wider context of that fast-moving and volatile political economy.

It remains surprising just how little allocation of corporate resources continue to be devoted to skills training and innovation. Across Western Europe only an estimated average of two and a half per cent of total labour costs is spent on that objective. But the European Union's own economic reform agenda has promised the formation of a more concerted effort up to 2010 to raise corporate awareness of what needs to be done. Indeed, many of the findings at the Cumberland lodge conference have reinforced the European Union's own skills and innovation strategy. This seeks to develop policies that can encourage the adaptability of employees, motivate workers to stay in jobs with their existing organisations but also to accept redeployment when necessary in accommodating workplace change. It also involves a wider revitalisation strategy that unifies the modernising needs of the enterprise with the demands and aspirations of the workers that it employs. It means the integration of social and employment policies with those that are concerned with industrial renewal and improved commercial performance. It must also require new public policies to encourage greater corporate social responsibility and the introduction of more accountable forms of corporate governance. It will need a greater commitment to better ways of accountability through the development of more transparent and representative consultation and information systems between firms and their employees. It will involve embracing the International Labour Organisation's new ideas of "decent" work and the "good" company. As Anna Diamantopoulou, the EU's employment and social affairs commissioner, told a meeting of the Greek banking community in Athens in April 2003: "A high performance, competitive modern economy has to be built around an inclusive society in which all can contribute to the full extent of their capabilities. A European high performing labour market has to be built on quality - on raising standards - not on cutting down costs to the bare minimum". High road and not low road ought to be the way ahead for Britain and Europe. But present policies are not going to be nearly enough to guarantee that this will happen.

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What is required is a new and more radical approach to workplace change. The Cumberland lodge research papers point us in a more sensible direction than the one we are pursuing at the moment. We need to shift our national focus onto the internal dynamics of firms and work organisation. Reform of external labour markets alone will not enable Britain to solve its productivity problem. Nor will it help to make the country a high performance economy capable of holding its own in the future in our globalising world.

Robert Taylor is media fellow on the ESRC's Future of Work Programme. He is also research associate on the Leverhulme-funded Future of the Trade Unions Project at the Centre for Economic Performance at the London School of Economics and Political Science.

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We need to shift our national focus onto the internal dynamics of firms and work organisation.

Contacts

**For further information on the Future of Work Programme
please contact:**

Programme Director

Professor Peter Nolan

Montague Burton Professor of Industrial Relations
Western Campus
University of Leeds
Leeds LS2 9JT

Telephone: 0113 343 4460
Fax: 0113 278 8922
Email: P.J.Nolan@Leeds.ac.uk

Website:

www.leeds.ac.uk/esrcfutureofwork



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Economic and Social Research Council
Polaris House
North Star Avenue
Swindon SN2 1UJ

Telephone: 01793 413000

Facsimile: 01793 413001

Email: exrel@esrc.ac.uk

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