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Skill Utilisation:
Towards a Measurement and Evaluation Framework

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Abstract

Policy makers throughout the developed world have long insisted that skills are central to economic success. However, there is a growing recognition that if skills are to deliver all that policy makers intend, they have to be taken up and utilised in the workplace. In the UK, skill utilisation is gaining prominence as an issue, particularly in Scotland, where 12 skill utilisation projects have recently been launched. If such policies are to function effectively, knowing what skill utilisation is, and how to measure its presence, is vital as is the ability to evaluate specific programmes. The paper offers some initial reflections on the construction of a measurement and evaluation framework. Particular attention is paid to definitional issues, including the problem of equating skill utilisation with the uptake of high performance working. Emphasis is placed on understanding why some projects succeed where others fail, building up the research capacity to support such work, and recognising that appropriate measures are likely to emerge through this process.

Introduction

Traditionally, skills policies in many developed countries have concentrated on boosting the *supply* of skilled and qualified labour as a key means of promoting international competitiveness, productivity and social cohesion/inclusion (Brown *et al*. 2001). There is now a growing recognition, however, that boosting skills supply is not sufficient to deliver these desired policy outcomes, particularly in terms of economic performance, and that more attention needs to be paid to employer *demand* for, and *utilisation* of, skills. Examples include Australia's recent experiment with skill ecosystems/skill formation strategies (see Alcorso and Windsor 2008, Payne 2008), New Zealand's skills strategy (Tertiary Education Commission 2008), and the policy debates around lifelong learning in Norway (Payne 2006: 498).

In the UK, where education and training policy is devolved, the issue of skill utilisation is also gaining increasing prominence, particularly in Scotland. At the same time, the UK Commission for Employment and Skills (UKCES) is pushing for a broader and more integrated approach to skills policy which embraces skills supply, demand, and usage (see UKCES 2009a). In England, moving beyond a narrow preoccupation with skills supply is proving more difficult, although even here there is a growing recognition that skill utilisation matters (DBIS 2009a, 2009b). Such developments call for a new type of skills policy, one which is more closely interwoven with interventions around economic development, innovation, and business improvement / workplace development strategies.

Developing robust measures of skill utilisation within particular (local) economies is, therefore, an issue of increasing importance. Indeed, this has recently been taken up by the Organisation for Economic Co-operation and Development as part of its Local Economic and Employment Development programme, the coordinators of which note:

> In addition to looking at skills supply and demand, skills utilisation by employers (or the way that skills and knowledge are applied in the workplace) is becoming an increasingly important issue… Local development organisations are confronted with the growing complexity of measuring local skills, identifying and forecasting future skill needs and assessing skill utilisation, given the increased mobility of labour, diversity of employment relationships, work practices and the pace of change driven by new technology and globalisation. Robust information systems

are needed to diagnose needs, make right policy choices and measure if policy is bringing results. (OECD 2010)

The challenge for policy makers is three-fold. First, there is a need to devise viable interventions to improve skill utilisation in what is still relatively new, and largely uncharted, territory. In the UK, Scotland has already begun to embark upon this process, having recently launched a suite of 12 skill utilisation projects. Second, there is a need to develop measures which can track what is happening to skill utilisation, whether at the level of the national economy, sector, region or sub-region. Third, policy makers must be able to design evaluation tools which allow them to assess project-based interventions and learn lessons from what is still a period of experimentation (Scottish Government 2008). This paper takes up this challenge by offering some initial reflections on what such a *measurement* and *evaluation* framework might look like.

The paper is structured as follows. Section one briefly outlines the policy 'turn' towards skill utilisation in the UK. Section two then explores how policy makers might measure skill utilisation as well as evaluate specific project-based interventions. Particular attention is paid to definitional issues and the problem of equating skill utilisation with the uptake of 'high performance working' (HPW). While measuring skill utilisation is certainly not straightforward, it is argued that several promising survey methodologies have already been developed which offer a useful starting point. When it comes to the evaluation of policy interventions aimed at enabling organisations to make better use of employee skills, the focus needs to be on helping policy makers to learn more about the specific contextual conditions and factors which explain why some projects succeed where others fail. The paper highlights how such a framework for evaluation might be developed.

The Evolving Skills Policy Context in the UK

For over a quarter of a century, skills policies in the UK have focused almost exclusively on boosting the supply of skilled or qualified labour (see Keep 2009). The UK (New) Labour government, elected in 1997, afforded a high priority to education and training, insisting that investment in human capital was now 'the key determinant of corporate and country success' in a new globalised 'knowledge-driven' economy (Blair 2007: 2). The

Leitch Review of Skills, established in 2005 by the then Chancellor of the Exchequer and subsequent Prime Minister, Gordon Brown, endorsed this approach. Arguing that skills are 'the most important lever within our control to create wealth and to reduce social deprivation' (Leitch 2006: 2), Leitch put forward a series of ambitious qualification targets designed to make the UK a 'world-leader' in skills supply at every qualification level by 2020. These targets were subsequently adopted as the cornerstone of skills policy for England (DIUS 2007), the assumption being that the country which amasses the biggest arsenal of skills (as proxied by qualifications) will triumph in the battle for economic supremacy.

While this particular framing of 'the skills problem' (as essentially one of inadequate skills supply) has long been criticised within academic circles for neglecting the issue of weak employer *demand* for, and *utilisation* of, skill (e.g. Finegold and Soskice 1988, Keep and Mayhew 1999, Brown *et al*. 2001, Lloyd and Payne 2002), it is only relatively recently that this line of argumentation has been taken up within sections of the UK policy community. Developments in Scotland have been particularly significant (see Payne 2009, Keep *et al*. 2010). Relative levels of spending on education and training in Scotland have consistently exceeded those in England over the last twenty years, yet despite having achieved a more highly qualified workforce at some levels than its southern neighbour, Scotland has not been able to match England's performance in terms of either GDP per head or hourly productivity. The election of a Scottish Nationalist administration in May 2007 prompted a major re-think of skills policy, the details of which were outlined in Scotland's first skills strategy, *Skills for Scotland: A Lifelong Skills Strategy* (Scottish Government 2007). Rather than concentrate solely on boosting skills supply, emphasis is placed upon the need to increase the demand for, and usage of skill, within Scottish workplaces. Particular attention is paid to issues of work organisation, with the strategy asserting that 'we believe that the way in which jobs are designed, filled and subsequently executed is key to unlocking Scotland's economic potential' (Scottish Government 2007: 31). In Wales too, where economic performance lags behind both England and Scotland, the Welsh Assembly Government has similarly asserted that, 'Skills will make the biggest difference to the prosperity of Wales when they are used effectively in Welsh workplaces' (WAG 2008: 53).

A further important development has been arrival of the UKCES as a major actor on the policy scene (Keep *et al*. 2010). Established in April 2008, as a key recommendation of the Leitch Review, UKCES has questioned the utility of a narrow supply-led, 'qualifications dominated' approach to skills policy. In its first state of the nations' report, the Commission made it clear that, in its view, the 'skills problem', confronting the UK:

> …lies largely on the demand side. The relatively low level of skills in the UK; the limited extent of skill shortages; and the potentially relatively low demand for skills relative to their supply taken together, imply a demand side weakness. The UK has too few high performance workplaces, too few employees producing high quality goods and services, too few businesses in high value added sectors. This means that in order to build an internationally competitive economy, the future employment and skills system will need to invest as much effort on raising employer ambition, on stimulating demand, as it does on enhancing skills supply (UKCES 2009a: 10).

Supported by UKCES, Scotland is now taking the lead on skill utilisation. The Scottish government has established a Skill Utilisation Leadership Group, undertaken a major literature review of the field, and has recently launched a suite of 12 'skill utilisation projects' involving colleges and universities, with funding channelled through the Scottish Funding Council (see below).

These developments throw down a direct challenge to the traditional skills supply policy model in England, and are proving difficult to ignore. The response from within the English policy community has been to try to accommodate this challenge by acknowledging the importance of skills utilisation, whilst continuing with its traditional supply-led, target-driven approach. Thus, the latest skills strategy for England, *Skills for Growth*, reaffirms the commitment to the Leitch targets, adding a new target of at least 75 per cent of the under 30 population having gone through higher education or an advanced apprenticeship by 2020 (DBIS 2009a). The strategy concedes, however, that, 'There is no automatic relationship between skills and productivity. Critically important is how businesses actually use the skills of their workforce; and how they use them in combination with other drivers of productivity, such as investment, innovation and enterprise (DBIS 2009a: 20). Commenting on *Skills for Growth*, Keep and Mayhew (2010) note that, 'Issues of skill utilisation and demand are dealt with sketchily, though

the fact that they are overtly addressed at all represents the early, tentative (and no doubt hotly disputed) signs of a shift in official thinking.' Unlike in Scotland, however, there is no indication that the UK government intends to experiment with projects aimed specifically at improving skill utilisation.

At a deeper level, policy makers across the UK are faced with a fundamental problem. Traditional education and training policies, focused around the enhancement of skills supply, offer a well-established repertoire of policy moves, supported by a well-oiled skills supply system in the shape of colleges, universities, private training providers who are well versed at ramping up skills supply at any given level. These are, in turn, underpinned by an infrastructure of agencies to support and superintend this activity and a set of well-understood targets and key performance indicators that allow the performance management of public interventions around boosting skills supply (see Keep 2009). Attempts to adopt a policy agenda that embraces interventions to improve skill utilisation are faced with the virtual absence of a number of key building blocks. There is no substantial pool of expertise that can fashion such interventions, no specialist institutions with a track record of successfully delivering programmes based around enhancing skill utilisation, and the means by which the success of any pilot programmes might be gauged is also far from clear. It is on this last point that this paper seeks to make a contribution.

Towards a Framework for the Measurement of Skill Utilisation

The policy 'turn' towards skill utilisation requires new measures which go well beyond those that have traditionally been applied to skills policy. For the most part, progress has tended to be measured according to the qualifications at various levels held by the workforce or a particular age cohort thereof, and participation in formal training events (see Felstead *et al*. 2005). Such measures are not unproblematic. It is widely accepted, for example, that they do not take account of the skills which people acquire through non-formal and informal learning both at work and within their wider lives, many of which are not easily amenable to certification (see Evans *et al*. 2006, DBIS 2009b: 6). Moreover, as noted above, measuring the 'outputs' of the education and training system

does not tell us whether, or to what extent, skills, once created, are actually utilised within the workplace.[1]

New templates for policy and the need for new performance measures

At present, the vast majority of actual policy action on skill utilisation is taking place in Scotland. There the general outlines of a new set of policy priorities have started to emerge. The Scottish government has recently noted that effective skill utilisation is about:

- confident, motivated and relevantly skilled individuals who are aware of the skills they possess and know how best to use them in the workplace

working in:

- workplaces that provide meaningful and appropriate encouragement, opportunity and support for employees to use their skills effectively

in order to:

- increase performance and productivity, improve job satisfaction and employee well-being, and stimulate investment, enterprise and innovation. (Scottish Government 2010).

Following on from this, the Scottish Government's Skill Utilisation Action Group (2009) identified three objectives for government policy:

1. Increase awareness of the issue
2. Help organisations implement workplace change
3. Support key delivery agencies and stakeholders to deliver 1 and 2.

The resultant policy moves already established as likely to form part of the response to these objectives include a family of 12 skill utilisation projects led by colleges and universities and funded by the Scottish Funding Council (SFC); the message about the importance of better skill utilisation being run under a broader business improvement banner, with skill utilisation integrated into general business support/development offerings; and public sector organisations being expected to lead by example (for example, the Scottish NHS Corporate Plan 2009/10 includes skill utilisation as an issue) and utilisation being incorporated into public sector inspection and quality improvement regimes. In addition, there is an intention to explore the feasibility of

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[1] With the vast bulk of learning in the workplace remaining uncertified, it becomes very difficult to tell how much of workers' existing stock of skills and knowledge is being utilised and deployed efficiently at work.

linked public procurement policy and the availability of business support to organisations' buy-in to the skill utilisation agenda; and for new forms of management and leadership training and development to be made available to underpin these approaches. It will be apparent that for policies to function effectively, knowing what good skill utilisation is, and knowing how to measure its presence, are going to be one of the cornerstones of policy development.[2]

Defining skill utilisation

Although critics of skills policy in the UK have long argued that more policy attention should be paid to issues of skill demand and usage, there have been few attempts to define the term, 'skill utilisation'. The literature review recently undertaken by the Centre for Enterprise on behalf of the Scottish Government found that 'there was no established definition of skill utilisation' and offered the following as a starting point:

> Skills utilisation is about ensuring the most effective application of skills in the workplace to maximise performance, through the interplay of a number of key agents (e.g. employers, employees, learning providers and the state) and the use of a range of HR, management and working practices. Effective skill utilisation seeks to match the use of skills to business demands/needs' (Scottish Government 2008: 2).

As the Scottish literature review notes, discussion of the appropriate organisational context for enhanced skill utilisation has tended to be dominated by the paradigm of 'high performance working' (HPW). Accordingly, 'When attempting to measure skills utilisation the majority of research focuses on employers and the measurement of the uptake of HPW' (see Scottish Government 2008: 62). The UKCES (2009b: i) similarly observes that, 'HPW is believed by many to provide a means to achieve more effective skill utilisation' and insists that it is a key explanatory tool for understanding this process (see also DBIS 2009b: 12). In essence, HPW refers to a combination, or combinations, of various work organisation and managerial practices which, when 'bundled' together, are thought to improve organisational performance as well as provide a range of positive benefits for employees. These practices have

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[2] The Scottish Skill Utilisation Literature Review noted that, 'In order to achieve a consistent and comparable basis for measuring skills utilisation it would be useful to develop a framework for measurement. This would allow the benchmarking and tracking of progress on key indicators of success for any skill utilisation strategy' (Scottish Government 2008: 83). The Scottish Skills Utilisation Leadership Group is currently working with UKCES to develop a UK-wide framework.

therefore become a proxy for the presence of effective skill utilisation in much the same way as policy makers have tended to view qualifications as a proxy for the presence of skill.

It is not the author's intention to produce another extensive review of the burgeoning literature on this topic (for recent examples, see Lloyd and Payne 2006, Hughes 2008, Edwards and Sengupta 2010). There are, however, a number of problems or difficulties with using HPW as the *central* analytical framework for viewing skill utilisation and as the main benchmark metric for assessing progress on this agenda. To begin with, there is considerable confusion and ambiguity as to what constitutes, what has been variously referred to as, a 'high performance', 'high involvement' or 'high commitment' approach (to name but a few of the many labels). There is no universal agreement as to the specific practices, or combination of practices, which are believed to deliver improved performance. At the same time, many of the *individual* practices that are often cited as part of the model are themselves subject to widely varying definitions. If one takes 'team working' for example, often assumed to be a core feature of HPW, this could mean anything from a more 'Scandinavian-type' model, based upon semi-autonomous teams, more complex tasks and flexible multi-skilling, to a more 'Toyota-type' model, with more narrowly defined roles and lower levels of discretion (Lloyd and Payne 2006). To this can be added further ambiguity and debate concerning the appropriate measures of 'performance', the precise mechanism through which such performance gains might be achieved, and the seemingly intractable problems involved in demonstrating that the adoption of certain practices *causes* higher performance (rather than vice-versa) – what Sisson and Purcell (2010: 58) refer to as the illusive 'holy grail' of HRM researchers.

Another major problem is that the evidence base on the purported link between HPW practices and higher skill demands is still quite thin, with much of the current research in this area remaining both problematic and inconclusive, not least on the issue of causality (for a discussion, see Lloyd and Payne 2006). Perhaps most significant of all, the vast majority of studies have focused upon the impact of HPW on organisational performance; only very few have examined the impact upon employees. Those studies that have explored the effects upon employees have found widely varying outcomes

ranging from improved staff retention, higher pay and enhanced job satisfaction through to work intensification, increased stress, and reduced levels of autonomy. In some cases, both positive and negative effects are found to operate together.

Indeed, these tensions are reflected in the UKCES' own literature review of HPW. Thus, on the one hand, it opines, 'HPW is concerned with the efficient and effective use of the workforce, but with an important emphasis on creating good quality work, rather than simply making employees work harder' (UKCES 2009b: 3). However, it also notes that, 'poorly managed HPW can have negative effects, particularly on employees' (UKCES 2009b: 23). Elsewhere, the Commission observes:

> … the literature… suggests that HPW can deliver broader outcomes that can be both negative and positive. Positive outcomes are higher job satisfaction and employee motivation which result in lower labour turnover…However, care needs to be taken to ensure that performance gains are not achieved to the detriment of employee well-being through increased workload, limited discretion and enhanced stress at work (UKCES 2009a: 126).

It is perhaps fair to say then that there is not inconsiderable confusion here as to precisely what HPW *does to and for* employees. Overall, the Commission errs on the optimistic side, asserting that, 'although some are more cautious about its impact on employees, the weight of the evidence pointing to the positive link between HPW, performance and employee well-being is difficult to ignore' (UKCES 2009b: ii). Critically, UKCES lays emphasis upon the way in which HPW is implemented, the awareness and quality of management and its willingness to relinquish a 'command-and-control approach' and create a culture of trust (see also Edwards and Sengupta 2010).

In his review of the literature, Hughes (2008: 46-47) also highlights the 'processual' and context-bound character of HPW, warning against a simplistic 'billiard ball' approach, in which certain practices are assumed to 'cause' changes in employee behaviour which, in turn, feed through to performance 'effects'. This approach encourages policy makers to seek to diffuse 'ready-made solutions' in a range of contexts, thereby ignoring 'the pluralities of people who enact "them", engage with "them", modify "them" and otherwise mediate the form "they" take'. There is, he argues, a need to pay closer attention to 'how practices are experienced by employees and managers, and how, indeed, such experiences interact with the success or otherwise of

high-performance work systems', something which involves delving into the way in which *power* relationships are (re)configured within the workplace and shift in response to the introduction of new forms of work organisation. *If* HPW is to be a/the means of delivering better skill utilisation (and that is still a rather big 'if'), then certainly the issues discussed above have major implications for the kinds and levels of support that may be needed in order to get HPW to work for organisations and their employees. In-depth, tailor-made help and advice would seem to be the order of the day – with major consequences for those funding and delivering such interventions. What cannot be assumed is that HPW offers a simple solution or one that can be approached without wrestling with thorny issues relating to the distribution of power at work, a nettle which policy makers are often reluctant to grasp.

Surveying skill utilisation

Measuring the take-up of HPW practices is unlikely then to provide a very reliable guide on skill utilisation and there is a need to develop new metrics with which to benchmark and measure progress on this agenda. One such measure would be the proportion of workers within any national economy, sector, region, or locality, who have the opportunity to deploy their skills and capabilities within their jobs and to be able to track how this changes over time. Such data is likely to be best obtained from surveys of employees (see below), although it is worth noting that valuable information can also be gathered from employers. Clearly, there are methodological issues in terms of who one asks within an organisation to provide this information, often the reliance upon a single manager, and how far they are in a position to comment accurately on employees' skills.

The Australian Survey of Employers' Use and Views of the VET system (SUEV), run by the National Centre for Vocational Education Research, provides an interesting illustration of how it is possible to gather useful data from employers (see Watson 2008). Employers were asked to rate the skill levels of their employees relative to organisational needs, stating whether they considered them to be above, adequate for, or below what was required. The survey found that only five per cent of employers considered that the skills of their workforce were below what was required and that 58 per cent thought they were adequate given the needs of the organisation. A relatively high proportion (37 per cent), however, felt that their employees had skills levels which exceeded organisational

requirements. These findings have further fuelled policy concerns around the under-utilisation of workforce skills in Australia, underlining the view that the Australian training dollar is 'missing the target' (Windsor 2009).

While asking employers about their perceptions of employees' skills relative to organisational needs can be valuable, the best data on skill utilisation is likely to come from employees themselves. Again, there are methodological issues that need to be taken into consideration. Individuals' responses may tell you more about their subjective views of their job than skill utilisation as such, while it is possible that some employees may also underestimate the skills they actually use at work. Equally, as Sgobbi and Suleman (2009: 4) have recently argued, it is important to guard against a bias towards the reported under-utilisation of skill; after all, as they put it, 'who doesn't own a wider set of skills than those merely required by one's position?' Such problems need not be insurmountable, however, provided sufficient care is taken over survey and question design. Indeed, there are already examples of surveys which have sought to obtain such information. The 2004 Workplace Employment and Relations Survey (WERS) (Kersley *et al*. 2006: 86), for example, included a specific question on skill utilisation, with more than half of all employees reporting that their skills were higher than those required in their current job. Moreover, WERS also allows for a direct comparison between employees' and managers' views on various topics within a particular workplace, since WERS surveys both groups in parallel within its sample of workplaces.

Other surveys have provided more detailed information on skill usage. The 1986 *Social Change and Economic Life Initiative* (SCELI) Survey, the 1992 *Employment in Britain* Survey and the three subsequent UK Skills Surveys (1997, 2001 and 2006) offer many useful insights (Felstead *et al*. 2007). Respondents were asked about the qualifications required to get the job, the length of training required, and the time taken to learn to do the job well. As noted above, the surveys also sought to examine the skills demanded of workers in their job by asking employees to rate the importance of particular activities such as the 'use of computers', 'dealing with people', 'analysing complex problems' and 'planning activities.' The surveys found that there had been a rise in demand across a range of generic skill domains up to 2001 which has since slowed

down, and, in the case of 'number skills', 'technical know how' and 'problem-solving skills', has levelled off altogether (see Felstead *et al*. 2007: x).

The UK skills surveys also addressed another key aspect of skill utilisation, namely how much discretion employees are able to exercise over their work tasks, quality standards and the pace at which they worked. Overall, the surveys found a mixed picture, with an increase in the overall complexity of work and rising levels of 'over qualification', together with a sharp decline in task discretion. The proportion of employees reporting a great deal of influence over how they did their work dropped from 57 per cent in 1992 to 43 per cent in 2001, where it stayed in 2006 (Felstead *et al*. 2007: xii). WERS 2004 also found that less than half of employees surveyed felt that they had a lot of influence over how work was done and the order in which tasks were undertaken, with only a third stating that this was the case in relation to the actual tasks they performed (Kersley *et al*. 2006: 95-97). Data on task discretion provides another indicator that might be used to gauge progress on skill utilisation insofar as jobs which allow employees greater autonomy are likely to make 'better use of employees' judgement and skill' (see Felstead *et al*. 2007: 120).

Other indicators which do not address skill utilisation *directly* can also be considered useful as part of a wider range of measures. Take informal learning for instance. It seems reasonable to assume that where employees are required to regularly engage in learning as part of their everyday work, the opportunities both to develop skills and use them within their jobs are likely to be relatively good. Despite the neglect of informal learning in policy terms and the overall lack of quantifiable measures, there has been progress recently in developing survey tools that can help to provide relevant data (Skule 2004, Felstead *et al*. 2005).

In Norway, Skule and Reichborn (2002) developed a survey methodology aimed at identifying what they called 'learning intensive jobs'. Using telephone-based interviews with a sample of 1500 respondents in 1999, individuals were asked about the demands their job made on them in terms of learning, the length of on-the-job training time required to do the job, and how long their skills lasted before they became out of date. Learning-conducive work was found to be associated with a range of factors, including demanding customers, management and owners; a high degree of exposure to

changes in technology and work demands; support from management for learning; and a high probability that learning will be rewarded through improved career progression opportunities and better pay (see also Skule 2004). This methodology has subsequently been incorporated into the annual National Learning Conditions Monitor, which was started in 2003 as a supplement to the Labour Force Surveys, with the aim of tracking the learning conditions across Norwegian workplaces (Daehlen and Nyen 2009).

Felstead *et al*. (2005: 365) argue that, 'While the [original Skule and Reichborn] survey provides an important step forward in our thinking, when examined in detail it appears tautologous since the learning intensiveness of jobs is explained by the learning opportunities respondents report (in other words, learning appears on both sides of the regression equation.)' Concluding that 'the connections between learning and work design are worthy of further examination' (Felstead *et al*. 2005: 365), they go on to describe an attempt to do this by incorporating a series of questions on 'learning at work' in the 2004 Adult Participation in Learning Survey, which has been conducted annually by the National Institute for Adult and Continuing Education (NIACE) since 1999. Using face-to-face interviews with a sample of persons in their own home, respondents were given a list of activities inside and outside of work, covering both formal and informal aspects of learning, and were then asked to rate them in terms of helping them to do their job better. The activities included training received, qualifications, use of the Internet, work-related reading, doing the job, being shown how to do things, reflecting on own performance, watching and listening to others, and using trial and error in the job. A key finding from this study was that, 'the workplace – and the everyday activities it comprises – provides the most highly rated source of learning' (Felstead *et al*. 2005: 368).

Linkages with work organisation were also explored through a series of questions designed to elicit the degree of employee influence and involvement at work. The main finding here was that the nature of work organisation makes a significant difference to the extent to which individuals engage in both formal and informal learning at work; where individuals and teams were allowed to exercise more discretion and autonomy over the organisation, pace and quality of their work, learning opportunities were significantly enhanced (see Felstead *et al*. 2005: 374).

While the survey is useful in highlighting the ways in which people learn at work and the links with issues of work organisation and job design, unlike the Norwegian study, it does not however provide a measure of the proportion of respondents who enjoy good learning opportunities through their work. For this, one has to go to the 1992 *Employment in Britain Survey* and the 2001 and 2006 UK Skills Surveys, which included a question on the learning demands of jobs. The latter two surveys also contained an additional question on the degree to which jobholders were expected to help others learn at work. The proportion of respondents strongly agreeing with the statement 'my job requires that I keep learning new things' rose from just over a quarter in 1992 to over a third in 2006. The proportion who strongly agreed with the statement 'my job requires that I help my colleagues to learn new things' also increased from 27 per cent in 2001 to 32 per cent five years later (see Felstead *et al.* 2007: 70).

The use of survey data, of the kind outlined above, already provides policy makers then with a range of general trend indicators that are relevant to those wishing to apply quantitative measures to skill utilisation. However, such measures are clearly not unproblematic. As we have seen in the case of *task discretion* and *learning at work*, they can move in opposite directions, making interpretation of such findings tricky. It is important then that surveys of this kind are supplemented by in-depth organisational case studies which can go behind the data and help to tell us what we should be looking for and trying to measure, as well as explain what the numbers might be telling us.[3] As explored below, the development of new, project-based interventions which are specifically designed to improve skill utilisation provides policy makers with a ready-made series of potential case studies through which to learn more about the conditions under which organisations can be helped to make more effective use of the skills already in their workforce. It is important therefore that evaluation is conducted in such a way as to facilitate such policy learning.

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[3] It may also be useful triangulate such survey data as that obtained through for example the UK Skills Surveys by running a series of parallel studies which observe a subset of survey respondents actually doing their job with the view to exploring the kind of skills and knowledge used. One might for example focus upon one or two occupations in parallel with each survey (e.g. supermarket cashiers). While this would clearly have cost implications, it could offer many useful insights in terms of whether for instance there are different ways of utilising the skills and capabilities of a particular occupational group.

Evaluating policy interventions aimed at improving skill utilisation

Presently in the UK, the policy interventions designed to improve skill utilisation are confined mainly to Scotland and have emerged only relatively recently. Alongside a new economic strategy, a series of 12 skill utilisation projects have been launched, with combined funding of £1.8 million. Although the funding remains relatively modest, the commitment to design new interventions in an area which has hitherto attracted scant policy attention is significant. Ensuring that the Scottish projects are properly evaluated, and that policy makers can learn lessons about what works, under what conditions and why is vital. What form then might such evaluation take?

The first step for policy makers is, of course, to ensure that when projects are designed and funded they are actually addressing skill utilisation. According to the Scottish Skill Utilisation Literature Review, 'Effective skill utilisation seeks to match the use of skills to business demands/needs' (Scottish Government 2008: 2). Whether 'skills matching' is the same thing as skill utilisation is an interesting question; one could certainly argue that it lies towards the easier end of the skill utilisation agenda insofar as it seeks to deliver to existing business needs by making adjustment to skills supply rather than effecting change in an organisation's strategy and/or work processes.

A brief glance through the Scottish Skill Utilisation project outlines suggests that the bulk appear to be focused around skill matching and course design rather than efforts to increase skill utilisation though work reorganisation and job redesign (see SFC/SDS 2009: Annex A). Two examples will suffice to illustrate this point. *The Engineers of the Future – MA2MA: Chemical, Electrical and Mechanical Engineering* project, operated by Forth Valley College with a funding award of £500,000, is seeking to 'develop a vocational degree route from modern apprenticeship level to Masters … [through] close collaboration between college and a university as well as the employer.' While this is a very legitimate and worthwhile activity, it can be questioned whether this amounts to a skill utilisation project. The same might also be said of the *Recognising and Enhancing Skills Acquired in the Engineering Workplace: from Modern Apprenticeship to BEng* project, operated through the Open University in Scotland with a funding award of £78,836. This project aims to 'establish a work-based model of study that would enable employees who have been through the Modern Apprenticeship route, and other

employees with HN awards, to validate and enhance their skills through a supported programme of study leading to the BEng and potentially to Chartered Engineer Status'. By contrast, other projects appear much closer to what one might consider a skill utilisation project. The *Scottish Dairy Skills Initiative*, operated through Barony College (with an award of £307,000), for example, seeks to address key industry challenges, namely 'attracting and retaining staff through workforce development and skills utilisation'.

Ensuring that projects are addressing issues around skill utilisation at their design phase is centrally important if valuable lessons are to be learnt from these projects. It is also interesting to note that a similar issue has been flagged up in the recent evaluation of Australia's national skill-ecosystem programme. Windsor (2006: 15) observes that several of the projects 'found it difficult to move beyond supply-side or more traditional VET design and delivery strategies.' There is, in other words, often a gravitational 'pull' to focus on improving skills supply, particularly if funding is directed through education and training providers who are more accustomed to thinking and acting in these terms.

Assuming however, that project design is right, how might such projects be effectively evaluated? Other countries, such as Finland, which have established workplace development/innovation programmes since the mid-1990s, provide useful pointers as well as raise a number of key issues. In Finland, as well as in Norway, such programmes are supported by expert researchers/consultants, who are afforded a central role in supporting project activity and evaluating their progress and impact (see Gustavsen *et al.* 2001, Payne and Keep 2003, Payne 2004, Alasoini 2006). The projects that have been funded though the Finnish Workplace Development Programme (FWDP)[4] have relied mainly upon 'soft' measures, notably self-assessment questionnaires, completed by a representative of management and employees, and supported by a project report submitted by the experts involved. Action researchers involved in this type of development activity have tended to argue that complex social phenomena do not lend themselves to simple mechanistic and quantifiable measures of success[5] (e.g. productivity measures) and that the evaluation of, what are termed, 'social innovations' within the

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[4] The programme, now in its third phase, has funded over 900 projects of various types since it was first launched in 1996 (see Alasoini 2009)

[5] If productivity or quality measures were to improve, the problem would be demonstrating that this was a result of the project. There my also be a 'time-lag' between the project and benefits to the organisation.

workplace requires a more qualitative approach by those with first-hand knowledge and understanding of the projects. One potential disadvantage with this type of evaluation is the risk of 'positive bias', given that researchers and workplace participants are in receipt of public funding (see Payne and Keep 2003). In relatively 'high trust' societies, such as Scandinavia, this is perhaps less of a problem, but in the UK, policy makers may want to supplement such reporting with more rigorous forms of evaluation, including case studies of projects carried out by those external to the project and without any vested interest.

Keep has recently outlined 'a set of general evaluation design principles' that offer a useful starting point for evaluating the Scottish Government's skill utilisation projects, based upon a three stage process, 'Before, During, and After' (see Box 1). While this is a useful starting point, such an outline can clearly be embellished and added to. One possible supplement would be to focus more explicit attention on the critical factor of employee engagement, an issue recently emphasised by the MacLeod Review (MacLeod and Clark 2009). The literature around HPW and the FWDP, as well as the early work undertaken by the Skills Utilisation Leadership Group, also emphasise the central importance of managing the process of change and ensuring that employees are actively engaged from the outset. It may be useful, therefore, to include this as one of the key criteria for project funding, or at least ensure that those responsible for leading projects have a clear strategy for how this is to be sought and achieved.

One of the key lessons to emerge from earlier path-breaking work on job enrichment/humanisation of work, undertaken in the UK by the Tavistock school (e.g. Trist 1963), as well as from similar programmes in Norway and Sweden, is the need for researchers to immerse themselves fully in the working practices of employees – to work closely alongside them, see how they engage with and solve their problems, and to learn from their situated knowledge and understanding (see Beirne 2008). Leading commentators have emphasised that innovation ultimately comes from workers themselves acting with the support of their managers (Gustavsen 1979). *From an evaluation point of view, then, it would seem important to place particular emphasis on employees' experience of projects, the extent to which they are engaged in their design and implementation, and indeed the breadth of that engagement across the workforce/work group.*

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Box 1: Keep's questions for evaluating Scottish skill utilisation projects

Before – to set a baseline assessment of the workplaces/employers/forms of employment prior to the project and the interventions it supports:

> What specific aspects of skill utilisation is the project aiming to target and change?

> Who defined these problems (institution, employers or both parties)?

> How is change expected to be brought about?

> Are there any simple metrics that can be used to set a baseline for the before and after of these aspects of skill utilisation in the areas of employment that the project aims to impact upon?

During – to capture process and management issues (in other words, evaluation that is both formative and summative):

> Within the project are there significant moments or decision points that mark shifts, successes or failures?

> Stakeholder perceptions of the quality of process and interactions

> Management structures and processes

> Commensurability of resources with scale and nature of task and objectives.

After – to measure outcomes and generate lessons:

> What are the impact measures, and over what timescale will they need to be assessed?

> What worked and what did not work, and why?

> How did participants rate the experience of the project (best and worst aspects)?

> How could this project be generalised as an approach?

Source: SFC/SDS 2009: Annex B

Such an approach also calls for a particular type of researcher, one that is committed to applied 'action research' and practical engagement with a job improvement agenda. This kind of research is currently less popular and widespread in the UK than it

used to be. Explanations can be found in the decline in Work Humanisation/Quality of Working Life as a major issue of policy concern from the 1980s onwards, the retreat of many of those involved in researching work and employment issues into a more detached, critical stance (see Warhurst 2005, Beirne 2008), and the recent pressures brought about by the Research Assessment Exercise (RAE) with its heavy emphasis on published outputs in top-rated academic journals. The emergence of skill utilisation as a 'live' policy issue, coupled with a new concern to apply broader 'impact measures' to research activity[6], suggest that the time may be ripe to try to redress the current imbalance as well as re-learn some of the lessons to come out of these earlier experiments with job redesign.

In terms of the research-base for supporting such activity, here too there may be implications for how one might evaluate progress on a skill utilisation agenda. *Given the importance of building up a 'critical mass' of researchers with the skills and knowledge to support such activity, it would seem important to have some clear measures as to how much headway is being made in this respect.* Public funding can clearly play an important role in creating incentives for this type of research. The funding of doctoral students, not least through ESRC CASE awards (jointly funded by the ESRC and governmental or industry partners) for example, who can specialise in such action research, possibly linked to the projects that are currently being launched in this area, offers one potentially fruitful way forward. Indeed, the Finns have long recognised the importance of such capacity building and have sought to apply similar measures to successive workplace development programmes.

Final Thoughts

In light of the recent policy 'turn' to skill utilisation, as most clearly evidenced within the UK in Scotland, the paper has explored what an appropriate framework for *measurement* and *evaluation* might involve. It has been argued that there is a need to move beyond the current preoccupation with high performance working as the primary analytical tool through which to engage with skill utilisation issues and as a measure of progress on such

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[6] Under new proposals currently put forward for consultation by the Higher Education Funding Council for England as part of its new Research Excellence Framework, which will replace the RAE, as much as 25 percent of future research funding could be allocated on the basis of its social and economic 'impact'.

an agenda. An emerging view within the research literature is that it is the *context* within, and *manner* by which, new forms of work organisation are *implemented* and *experienced* that is crucial to the success or otherwise of such initiatives.

Developing a framework for measurement and evaluation therefore requires both quantifiable measures of skill utilisation across different spatial scales (national economy, sector, region, sub-region etc.) and a means of evaluating projects to assess their impact and facilitate policy learning about what works and why. The paper has suggested that there is a variety of surveys already in place which can provide a range of relevant data on the opportunities available to employees to use their skills and knowledge within their job. However, surveys provide, at best, a series of broad, impressionistic 'trend indicators' and need to be combined with other micro-level measures designed to explore the effectiveness (or otherwise) of specific policy interventions that are aimed at improving skill utilisation in any given workplace. Given that policy makers are only now beginning to fashion such interventions, it is perhaps unrealistic to believe that appropriate measures can be specified beforehand, and it may well be that we will only know which measures of success or effectiveness to adopt as and when we begin to engage practically with this agenda. The framework put forward by Keep (SFC/SDS 2009) to evaluate the Scottish skill utilisation projects reflects this concern to use the projects as a learning device by placing emphasis on the need for heavy, front-loaded *formative* evaluation at the piloting stage. Whatever micro-level measures of effectiveness emerge through this process, it seems clear, however, that they will have to go beyond management-led evaluation and afford appropriate weight to employee perspectives regarding the extent and nature of their involvement in projects as well as how those projects are viewed and received.[7] Then, there is the question of *who evaluates?* One possibility is to use expert researchers who work closely with projects from beginning to end and who have first-hand knowledge of how the project developed

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[7] Rather than always going first to management to explore how work might be re-organised and then evaluated, it would be interesting to provide employees with the opportunity (with expert support) to re-design their own jobs. Whether there are any managers who are sufficiently enlightened to afford their employees such an opportunity remains to be seen but clearly it would require a willingness to cede some element of managerial control. The difficulties that are likely to be involved in developing such an experiment are an indication that job redesign is inextricably linked to issues of *power* within the workplace.

and the kind of problems and challenges they faced, supplemented with some form of external evaluation.

Finally, it has been argued that in the UK there is a need to build the expert capacity to support project activity aimed at improving skill utilisation. Performance measures applied to skill utilisation strategies need to reflect, and take account of, this need. This might include measures of those engaged in action-based research aimed at supporting workplace development/skill utilisation and the numbers of doctoral students that could potentially be supported through such a strategy. Again, however, until one actually embarks upon the process of designing specific interventions aimed at redesigning work with a view to improving skill development and usage, it is very difficult to know what a curriculum for training and nurturing this kind of action researcher might look like.

There is no denying that the measurement and evaluation of skill utilisation constitutes a major challenge. Yet, progress on this agenda can be made by drawing upon current examples both in the UK and abroad. Clearly, this agenda is not without cost implications and, at a time when public funding is coming under increasing pressure, it is necessary to justify such investment. The prize, however, is a rich one; data that allows policy makers to piece together an often-complex picture of how far employers are making effective use of workforce skills and the opportunity to learn valuable lessons about the conditions under which projects are most likely to deliver success. This information can be used to inform the design of more targeted and cost-effective policy interventions.

Coda

The paper was written prior to the May 2010 UK general election. This saw the coming to office of a Conservative-Liberal Democrat coalition government committed to radical action to address the current 'crisis' in public finances resulting from the recent financial crisis, bank 'bail out' and subsequent economic recession. It remains to be seen whether the new administration will engage with the skill utilisation agenda in England and, if so, what forms this might take. Suffice it to say that there are deeply ingrained political and ideological barriers to governmental 'interference' in firms' business and organisational

strategies, as well as their approaches to employee relations and work design, which might be seen to encroach upon areas of 'managerial prerogative'. Elsewhere, however, the political complexion of the UK looks very different. In Scotland, there is a minority Scottish Nationalist administration, while Wales has a Labour/Plaid Cymru coalition. It seems highly probable then that skills policy trajectories will continue to diverge across the devolved UK, with those nations most likely to engage proactively with the skill utilisation agenda, namely Scotland and (to a lesser extent) Wales, now being required to do so in the context of much tighter funding constraints. It will be interesting to see how the skill utilisation agenda fares in this new world of austerity.

Acknowledgement

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