

EDUCATION AND INDUSTRY – TAKING TWO STEPS BACK AND REFLECTING

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INTRODUCTION

The field of education/industry interaction has been studied now for over three decades, and many of the issues that are the focus for such inquiry have been with us throughout this period. Much of the extant literature either addresses definitional questions (e.g. what constitutes 'employability'), or examines a range of important operational issues about how best to design, manage and deliver various forms of education/business interaction and collaboration.

The aim of this paper will be to address wider topics that sometimes tend to get ducked or shunted to one side when education/industry interaction is being debated. With youth unemployment high and rising, public money scarce and about to become scarcer, educational institutions under severe pressure, and the UK Commission for Employment and Skills (UKCES, 2009a) offering a fresh definition and analysis of the causes of the UK's 'skills problem' (one based around weak demand and poor skill utilisation, rather than failings of supply), the time seems ripe to pose some big questions about the conceptual backdrop and debates against which the bulk of education/industry collaboration takes place. In particular, the paper argues that the longstanding failure to achieve any genuine consensus about the rights, roles and responsibilities of state, employers and education and training providers (Gleeson and Keep, 2004) is liable to create significant problems in a world where the gap between policy aspiration and reality, and between the bargaining power of individuals and employers, is growing ever wider.

In thinking about what issues to address, it can be argued that education/industry liaison/interactions can be analysed at three ascending orders of magnitude in terms of their scale and significance for the effective functioning of the interface between the education and training (E&T) system and the labour market:

1. **Micro** – for example, around the identification of successful models for liaison activity, the level of demands being placed on employers by policy, the quality of employer representation and the forms that interaction can take.

2. **Meso** – around employer demands for enhanced employability; zero-sum game competition between employers, occupations and sectors for what are perceived to be scarce pools of talent; patterns of recruitment and selection that send powerful (sometimes perverse) signals to young people; and questions about who, in a post-Leitch era pays for and delivers what types of E&T.
3. **Macro** – around over-qualification and mis-matches, impoverished and weak demand for skills, lack of employer ambition, and the persistence of low paid, 'bad' jobs.

This paper will concentrate the bulk of its attention on topics that occur at levels 2 and 3 since these are the ones that tend to be relatively neglected, and will build on a number of questions raised in Huddleston and Keep (1999), and Gleeson and Keep (2004), as well as the author's work on incentives to learn (Keep, 2009; Keep and James, 2010a) and patterns of recruitment and selection (Keep and James, 2010b).

THE UNDERPINNING ISSUES

Before addressing these points, it is important to stress a number of structural features of debates about industry/education liaison or collaboration that need to be understood from the outset if any sense is to be made of either policy or practice. The first, which is a universal problem across place and space, relates to the requirement on educators to try to satisfy competing, sometimes incompatible demands. The second centres on the long-standing failure within the UK to establish the respective rights, roles and responsibilities of the different stakeholders within the E&T system. The third relates to the assumed congruence between organisational ownership and concepts of national interest, and the fourth to the emergence of notions of education as a business activity in its own right.

An Abiding Fundamental Issue Around Competing Interests

The overall structure and terms of the debate around industry/education liaison or collaboration revolve around the ability of E&T to reconcile, or failing that to mediate between, competing claims. This is because the E&T system and those who run it have a number of different sets of 'customers' whose needs or 'demand' it must try and satisfy – namely students (and their parents); employers; and finally wider society, whose views are often represented, with varying degrees of veracity, by the state in the shape of local, but more importantly central government and its agencies. It cannot be stressed too often or too strongly that the interests of these three groupings are not always either internally harmonious or coherent, or coterminous between one another, and that education often ends up trying to engineer an uneasy balance between divergent needs and requirements (Huddleston and Keep, 1999; Gleeson and Keep, 2004). For example, there is no single, simple, widely accepted view about what education should be aiming to achieve, what skills and values it should be trying to instil, and therefore what an ideal curriculum and balance between the different subjects or areas of study might be (Pring et al, 2009). Moreover, the blame for choices made by one party that are not agreeable to another – for example, the decision made

by many students not to pursue Science, Technology, Engineering and Maths (STEM) subjects which annoys some employers – often end up residing not with those making the offending choice, but with the E&T system which it is claimed has somehow failed to incentivise or guide young people to make the ‘correct’ decisions.

The internal incoherence and potential for conflict that arises as a result is, as the author has noted on other occasions particularly a problem when E&T is tasked with responding to the needs of employers. Employers are not homogeneous as an interest group – to talk about the ‘needs of employers’ is often a waste of time or actively misleading, since different employers have very varied needs, and ones that sometimes compete with one another (a point returned to below). Moreover, there are huge problems with securing useful employer ‘voice’ or representation (Huddleston and Keep, 1999; Gleeson and Keep, 2004; Keep and Stasz, forthcoming). For example, views about industry/education issues are often elicited from human resources managers, recruitment managers, or the corporate social affairs function. Interesting thought these may be, it is important to remember that staff in these roles often have limited knowledge of, or influence over, the views and actions of line managers (junior and senior) and the handful of corporate policy makers that decide the strategic direction of the organisation and with it the need for skills and how skill will be deployed within the workplace.

Vagueness Be My Friend

A second key structural element underpinning debates around the relationship between industry and education in the UK is the persistence over time of a refusal to engage with and resolve issues around who should be doing what (Gleeson and Keep, 2004). As the author has noted on a number of occasions, the failure across the UK to decide the rights, roles and responsibilities of the different parties within the E&T system (state, individual, employer, education and training provider) leads to ambiguity and to endless contested attempts to apportion blame when results fail to meet expectations and things go awry. For example, there is no commonly agreed and understood division of responsibility around the most appropriate site of learning for different kinds of skill (see Gleeson and Keep, 2004 for a more detailed treatment of this issue). Despite research (and common sense) suggesting that there are some ‘employability’ skills that are best acquired within the workplace environment in which they will be deployed, schools, colleges and universities continue to have to struggle to inculcate these skills via formalised learning or workplace simulation because employers offer insufficient work experience placements.

At the same time the issue of what elements of initial and continuing learning employers can reasonably be expected to contribute towards the costs of, and at what levels, remains wholly unclear. Under the New Labour administrations the tendency was for the state to offer increasing amounts of subsidy to employers to support both initial learning in the workplace (apprenticeship), and many different forms of adult skill acquisition (for example, via Train to Gain). The reasons for this trend are reviewed in Keep, 2006. Given the current crisis in public spending and the Coalition

Government's firm expectation that parties other than the state (i.e. individuals and employers) will have to contribute more towards the cost of acquiring skills, the lack of well-established and well-respected norms or guidelines represents a potential source of tension and conflict.

The Declining 'Britishness' of British Industry?

A third factor, albeit one that is often hidden, that underlies UK debates about industry/education collaboration is an assumption, particularly on the part of policy makers, that employers will be willing to sign up to some form of national project around the improvement of education and training outcomes, and that they will therefore agree to commit resources to this project and elements therein. For example, policy makers have endlessly believed that employers will be keen to increase the number of apprenticeships on offer, to provide more and better work placements for different types of student, and get involved in the detailed design of qualifications. Underlying these expectations is a notion that as a better performance by the UK's E&T system is often argued to be in the national interest, it will be of direct importance to the UK's major employers. This tendency to read across from national interest to that of large employers operating in the UK as though the two might be regarded as more or less synonymous, may be seriously misplaced.

In essence, over recent decades the degree to which large firms operating within the UK are liable to see their future prosperity as bound up with the overall success of the national economy or the development of the national system of skills supply, has almost certainly declined. There are two reasons for this. First, foreign ownership of UK-based private sector operations has been growing very fast, with much foreign direct investment (FDI) coming not in the form of new, greenfield start-ups, but rather the acquisition of existing domestically-owned productive capacity (Sisson and Purcell, 2010). The takeover of Cadburys by Kraft Foods is but a large and recent example of a broader ongoing trend, the scale of which does not appear to be widely apprehended. By 2007 the stock of FDI in the UK stood at £1,348 billion and embraced 13,500 foreign-owned companies (Marginson and Meardi, 2010), with the share of manufacturing employment in foreign-owned enterprises rising from 19 per cent in 2000 to 27 per cent by 2005 (Marginson and Meardi, 2010: 209). Moreover, work by Oxford Innovation (2009) suggests that the share of gross value added (GVA) accounted for by foreign-owned firms in 2007 in manufacturing had reached 38 per cent; in mining and quarrying 70 per cent; and in gas, water and electricity 46 per cent. At the same time, foreign owners held 43 per cent of the shares in UK manufacturing firms, 42 per cent of non-manufacturing, and 34 per cent of financial services companies (Oxford Innovation, 2009). The deputy-director general of the CBI remarked that, "the fundamental problem of takeovers is that we no longer have the long-term shareholder base we used to. Short term and international equity firms are now the ones making decisions about the future of iconic UK firms" (Webb, 2010). It might further be observed that short term and international equity shareholders are also, indirectly, deciding on what priority UK firms will place on skills issues and investment.

The second reason is linked to the first. Just as foreign capital has flowed into the UK, UK firms' capital has been flowing out and has been for a long time (see Keep and Mayhew, 1996 for the position 14 years ago). Between 1990 and 2007 UK-owned enterprises investment overseas increased from \$230 billion to \$1,486 billion (Sisson and Purcell, 2010), much of it to fund the acquisition of overseas companies.

The overall result of these developments is that a large and growing swathe of production, sales and employment is in the hands of organisations whose ownership is non-British and whose commitment to a 'national project' around enhanced skills and wellbeing for the UK workforce and society may be limited. For many large British-owned organisations, the proportion of their turnover, workforce and profits that reside within these shores is dwindling, and is sometimes quite marginal, and the most promising opportunities for growth and profit often reside elsewhere. Given enormous pressures to maximise short-term profits, and the opportunities that exist to offshore work, or to buy skills in via migrant labour (see below), the willingness of employers to engage with some elements of the UK government's ambitions around improving skills (for example, via offering a substantial boost to the number of apprenticeship places they are willing to offer) may be more limited than policy makers are hoping (Keep and Stasz, forthcoming). In many ways these often unseen and unacknowledged structural changes within the ownership of our economy lie at the heart of many of the issues around employers' behaviour that are explored below.

A New Element – Education As Business

As Keep and Gleeson (2004: 38) noted, alterations in the form and nature of the relationship between the state, employers and education mean that, "Education is now a less separate or discrete entity: its relative autonomy has been curtailed and appropriated by neo-liberal incursions of the market and enterprise economy". This development has been proceeding apace, and in recent times the nature of the industry/education debate has started to change as a result of the growing potential for private providers to deliver different elements of publicly-funded E&T, via outsourcing and by simple competition for work and funding (what government has terms contestability) between public and private providers (Ball, 2007). As a result, an increasing element of the business role in education is coming to be seen by some in the business community, not as simply liaison with publicly-funded E&T providers to improve the quality of outcomes, but as direct business involvement in the provision of E&T outcomes as a source of opportunity for profit (see CBI, 2010a for details of this approach).

The long-term implications of this development are unclear, but are liable to be considerable, not least in tending to blur the lines between employer as consumer and employer as provider. Already the Confederation of British Industry finds itself acting simultaneously as both a consumer advocate and also as a lobbyist for the efficacy of a particular provider (private sector) constituency (CBI, 2010a).

Above and beyond the arrival of a new model of employer engagement that moves from liaison with, to profit-based co-production within, the E&T system, this paper will argue that there are a range of other forces and ideas that are serving to disrupt and destabilise both the concept and the practice of industry/education collaboration as it has traditionally operated. In particular, it will be argued that the question of the underlying nature of, and overall balance of responsibility for, the UK's 'skill problem' may be changing, and that with this comes a range of questions about who is best placed – industry, education, or a combination thereof – to respond. It is to these issues that we now turn.

A SKILLS SUPPLY REVOLUTION AND A PROBLEM DIMINISHED?

The first element of change has come from the cumulative effect of many years of pressure on education, from firms and politicians, to place greater emphasis upon the needs of employers and the labour market; and also from massive improvements in the volumes of qualified labour being injected into the labour market. At a superficial level, it is now almost possible to pose the question, 'skills problem, what skills problem?'

Rising Participation and Achievement Levels

Since the early 1980s the levels of input (as measured by the proportion of given age cohorts participating in E&T) and of output (as measured using qualifications achieved at different levels) have both increased massively, particularly in terms of post-compulsory participation in FE and HE. As UKCES note:

Regarding qualifications.....the decade to 1997-2007 saw unprecedented improvements in the numbers (and proportions) of people in the UK who have qualifications. The numbers who have high level qualifications (Level 4 plus) increased over 10 years by over 3 million, an increase of 44%, whilst at the other end of the spectrum, the numbers who have below Level 2 qualifications decreased by over 2.5 million, or 20%.

(UKCES, 2010: 36)

Small and Limited Skill Shortages

Another way of measuring how well the E&T system and providers within it are responding to demand from employers is the level of skill shortages that are being reported. In England the most comprehensive means of gauging this is the National Employers Skills Survey (NESS), which used to be funded and managed by the Learning and Skills Council (LSC), but which is now under the management of UKCES. NESS 2009 covered a representative sample of workplaces with no less than 79,152 responses (see Shury et al, 2010 for details).

It demonstrated that the scale of skill shortage vacancies (i.e. jobs that were hard to fill because of lack of suitably skilled applicants) was small – afflicting just three per cent of employers, and equivalent to 0.3 per cent of all jobs,

though they were more pervasive in some sectors and occupations. This outcome was not simply the result of the recession. As UKCES note, “despite 14 years of continuous economic expansion between 1993 and 2007, difficulty in filling vacancies was experienced by only a small minority of employers” (UKCES, 2010: 69).

Employer Satisfaction - NESS

One of the issues that has remained a hardy perennial in debates about industry/education is the issue of employer satisfaction with the employability or work-readiness of young people entering the labour market. NESS has asked employers about this, and the results suggest that levels of satisfaction are surprisingly high. In the 2009 NESS, 66 per cent of employers who had recruited a 16-year old school leaver regarded them as either ‘very well prepared’ or ‘well prepared’ for work, 74 per cent expressed similar feelings about those 17 or 18-year olds they had recruited from school or college, and no less than 85 per cent of employers were happy with recruits from university (Shury et al, 2010: 15).

As UKCES have argued (UKCES, 2009b) the current situation is not perfect, but the measures necessary to bring about improvement are now well recognised and reasonably widely agreed. Moreover, substantial efforts are already under way to embed employer engagement and employability inside mainstream provision in schools, FE and HE (for the Scottish position, see Frontline, 2009; SWQ Consulting, 2009; and for the picture in English HE, see Nixon et al, 2006). In particular, the role of employers in providing good quality work experience is seen as critical (Mason et al, 2006; McKnight, 2002; UKCES, 2009b; Ball and Manwaring, 2010), and in many ways the main stumbling block to further progress is the supply of such places for the many different groups of students in schools, colleges and HEIs that in an ideal world might want or need to access work experience.

More and Better Industry/Education Liaison

The generally favourable results reported above in part reflect cumulative improvements in the overall salience of the needs of industry and employment in policy thinking and professional practice, and also the impact of a strengthened and deepening of industry/education liaison activities at a range of levels (see, for example, CBI, 2008 and 2009; and Connor and Hirsh, 2008). It would not be unreasonable to assert that both the quality and quantity of interacting and relationships between individual E&T providers and firms has changed out of all recognition over the last 30 years. There is always room for improvement, as all parties will admit, but progress has been substantial.

THE EMPIRE STRIKES BACK – REFRAMING THE PROBLEM TO REINVENT A CRISIS?

Given the points noted in the section above, it might seem that the nature of industry/education liaison and the debates that surround it would have changed, and that the traditional ‘deficit discourse’ model (Gleeson and Keep, 2004: 57), whereby the E&T system was seen as being unresponsive to the needs of the economy (Huddleston and Keep, 1999; Gleeson and Keep,

2004), would have dwindled. To a certain extent this has proved to be the case, but as old problems have shrunk in scale, new issues have been discovered that allow some sections of the employer community and commentators linked to their perspectives to find fault afresh.

Competition between sectors and occupations

The first cause of continuing employer unhappiness stems from the very traditional, but endlessly unresolved, and probably unresolvable, contestation between sectors and occupations for staff. In labour or skill intensive sectors, the ability to attract reasonable quality staff in sufficient numbers is important to businesses, and because of issues such as pay, promotion prospects, hours of work, working conditions and intrinsic interest, some sectors and occupations tend to be viewed by job seekers as more attractive than others (Keep and James, 2010b). The market in the end determines what jobs and employers are more attractive than others, and labour supply tends to follow. As a result, when local labour markets are tight, some employers tend to lose out, in terms of the number of applicants, or their perceived quality, or both relative to other employers or sectors. In general terms, the relative losers have tended to be the least well organised, fashionable or prominent employers - in manufacturing (particularly traditional sub-sectors such as textiles that are perceived as being in decline), in low pay sectors and occupations, in work that offers poor conditions (e.g. unsocial hours), and in less glamorous forms of employment (see Lindsay and McQuaid, 2004; Nickson et al, 2008).

Traditionally, two reactions by less favoured employers have been liable to result (in more recent times a third – the use of migrant labour - has become much more prominent). The first is recourse to efforts to alter young people's perceptions of the relative attractiveness of the work, via a battery of different industry/education activities, such as the development of new teaching materials focused around this kind of employment, enhanced work experience, business games and simulations, teacher secondments and improved careers and guidance materials (Keep and James, 2010b: 25). It seems unclear what the overall long-term impact of such efforts is liable to be. Insofar as individuals have choice, they will tend to avoid work that is poorly paid and unpleasant, no matter how such employment opportunities are promoted.

The second, and rather less productive approach, is for employers to blame schools, teachers and careers advisors for pushing young people away from their occupation or sector, either through poor and uninspired teaching in those subjects that might lead to such work (much of the current debate about STEM 'shortages' seems to take this line – see CBI, 2010b), or by pushing young people towards other forms of employment (CBI, 2007 and 2010b).

In reality, UK higher education as a whole performs quite well in terms of educating students in the STEM subjects, and the overall volume has improved in recent years, following a downturn in the first part of the last decade (see HEFCE, 2010). There are limited numbers being produced in some specialised fields (e.g. some forms of electrical engineering) and this

may be leading to shortages in the labour market. However, the main overall problem is not the supply of qualified labour, but where it subsequently chooses to be employed, which is often not in areas that are directly related to first degree discipline (see Wilson, 2009).

As HEFCE (2010) and others have noted, perceptions of a STEM crisis have been with us for a long time (see the 1980 Finnieston Report on the engineering profession for an early example within the current cycle of concern). The causes of limited demand from students for some STEM subjects and courses are complex, as are the reasons why those trained in STEM areas chose career paths that may not directly require this kind of skill and knowledge, but insofar as a crisis really exists (see Wilson, 2009 for evidence that the rhetoric of crisis or shortage is open to some doubt), it is unclear how the E&T system on its own can resolve these problems.

In many ways, aggregate course and career choice by students represents a game of blame which E&T providers and careers advisors seem unlikely to ever be able to win, because insofar as they manage to satisfy one constituency, another group of employers will then see themselves as coming to lose out. For instance, the CBI, complaining about science and engineering shortages, suggests that 'business' (although they plainly mean one section of business) is looking for, "the most brilliant graduates, to become future science leaders drawing on advanced academic knowledge and depth of experience" (CBI, 2010b: 4). One can readily imagine the protests from banking, commercial law firms and business services and consultancies if more of the most brilliant graduates did take this route, pursued careers as research scientists, and eschewed their offers of employment.

Wars for Talent – there's never enough to go around

A relatively recent further development of the problem outlined above stems from the concept of a global 'war for talent'. In essence, this is a view of the upper end of the labour market wherein there is a more or less finite pool (within individual countries and across the globe) of extremely talented individuals, whose skills, knowledge and aptitudes are vital to the wellbeing of the modern corporation, and that competition between employers to identify, recruit and retain these talented few is the key to competitive success (see Michaels, Handfield-Jones and Axelrod, 2001 for the model in its original form). This way of seeing the labour market has proved extremely influential, and has structured the thinking and behaviour of many large organisations (Brown, Lauder and Ashton, 2010).

There is not space here to go into this topic in detail or to discuss whether this war is real or phoney. The key point to note is that the 'war for talent' discourse has been widely adopted by business and has had two major effects. First, via shifting the focus from the quantity of skilled and qualified labour being produced to its perceived quality, the maintenance of a scarcity model in a world of apparent over-supply. Thus the massification of UK higher education and the huge increase in the supply of those holding Level 4 qualifications and above has not been 'enough' because the pool of highly

talented individuals within this mass of graduates has not expanded proportionally. This has led to complaints from some employers that UK HEIs are not equipping enough of their students with the right skills to the necessary level (CBI, 2010c).

Second, as a consequence of the first effect, the labour pool in the war for talent has tended to be expanded to recruitment across the globe from a limited group of elite universities (see Brown, Lauder and Ashton, 2010). This, in part, helps explain current attempts by some UK employers to fight the government's proposed cap on the numbers of non-EU migrants coming to these shores (see below).

Employability, Skill Shortages, Employer Satisfaction and Survey Data

As noted above, the picture painted by the huge NESS survey suggests reasonably high levels of employer satisfaction with the general quality and work readiness of those emerging from the E&T system, and very limited levels of genuine skill shortage. However, different surveys, using different (generally looser) definitions of skill shortage, with smaller sample sizes and limited response rates, tend to illicit rather different answers.

For instance, the CBI (2010b: 2) claim that, "two fifths of employers currently struggle to find the science, technology, engineering and maths (STEM) talent they need. This is particularly acute for businesses in the science, high-tech and IT sectors where over two thirds experience difficulty recruiting employees with relevant skills". This result is drawn from the CBI/EDI 2010 Education and Skills Survey (CBI, 2010c). The same survey also concluded that 68 per cent of employers were dissatisfied with the 'business/customer awareness' of school and college leavers, and 57 per cent were unhappy with their time management skills (CBI, 2010c). The UK-wide sample size is not reported, and therefore a response rate cannot be ascertained, but the number of respondents is reported to have been 694 organisations. Given that 54 per cent of them claimed to be currently engaged in apprenticeship training, this is unlikely to be a representative sample of employers, since the overall proportion of English employers involved in apprenticeship appears to be somewhere between four per cent (Shury et al, 2010: 7) and 13 per cent (Steedman, 2010: 17).

The Chartered Institute of Personnel and Development (CIPD) recently secured considerable press coverage for their most recent quarterly Labour Market Outlook survey (CIPD, 2010a and b), the results of which were presented as undermining the case for the government's proposed cap on non-EU migrant labour. In it, future demand for migrants was reported as likely to be rising, though the reasons for this were not stated. At the same time, its respondents claimed that a range of vacancies were 'hard to fill' (though this may have been caused by many factors other than a shortage of relevant skills among applicants (like unattractive terms and conditions being offered) – i.e. these were not skill shortage vacancies in the strict definition of that term used in NESS). The areas where vacancies were occurring included engineering, accountancy, finance professionals and IT posts (CIPD,

2010a). The number of respondents in this survey was 598, representing a response rate of just five per cent!

SOME EMERGING UNDERLYING STRUCTURAL ISSUES AND THEIR CONSEQUENCES

Despite the problems outlined above in terms of fresh sources of employer dissatisfaction with the E&T system, recent developments have also tugged in the opposite direction and now raise the possibility that the underlying nature of the discourse around the need for industry/education liaison may be about to undergo a fundamental shift. That rather than tending to see the bulk of the problem residing in unresponsive E&T providers, there may now be pressures building up that lead towards a more balanced debate that also engages with weaknesses in underlying levels of demand for skill from employers, the quality of jobs on offer to many young people, the pattern of incentives that this creates, and with the way employers do or do not effectively deploy skills within their workplaces. There is also the broader issue of the equity of a labour market where the balance of power has swung so far in favour of the employer and against the individual.

Supply or demand, wherein lies the greatest problem?

Traditional analyses of the UK's 'skills problem' have always revolved around deficiencies in the supply of skills, with much of the blame being placed on courses, qualifications, forms of pedagogy and institutions that failed to motivate young people to achieve in initial education or entice them to participate successfully in post-compulsory provision. It was alleged that education's failures in this regard left employers without the skills they needed, with deleterious effects on economic performance. The answer to the 'skills problem' therefore revolved around better performing schools, colleges and universities, endless reform of the E&T offer (in terms of new qualifications, modes of study and types of pedagogy), targets for enhanced levels of output (normally specified as qualifications achieved), harsher inspection and greater competition as a means of exerting pressure on providers, and increased public spending to power the system to 'world class' standards (Leitch Review, 2005 and 2006).

More recently, as noted above, there has been a substantial increase in the skills supply. Moreover, a competing analysis of the skills problem has emerged. This originated in the research community (Finegold and Soskice, 1988; Hyman, 1992; Keep and Mayhew, 1996; Keep, Mayhew and Payne, 2006), but has been embraced by the Scottish government (2007) and more latterly by the UKCES. UKCES's analysis of the UK labour market concludes that the skills problem:

lies largely on the demand side. The relatively low level of skills in the UK; the limited extent of skill shortages; and the potentially 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.
(UKCES, 2009a: 10).

At a more finely grained level of analysis different aspects of the problem are apparent. For example, our relatively weak levels of post-compulsory participation and achievement are at least partially explained by the structure of demand for skills in the youth labour market (Keep, 2005; Pring et al, 2009) and the weak incentives to learn that this creates. As Francis Green has noted:

Unfortunately, Britain has long been caught in a low-qualification trap, which means that British employers tend to be less likely than in most other countries to require their recruits to be educated beyond the compulsory school leaving age. Among European countries, only in Spain, Portugal and Turkey is there a greater proportion of jobs requiring no education beyond compulsory school. There is some way to go before British employers place similar demands on the education system as are placed in the major competing regions in Europe.
(Green, 2009: 17)

This is a situation that goes some way towards explaining the UK's relatively weak record on post-compulsory participation and achievement (Keep, 2005), in that it creates a situation where the incentives to learn being sent by the labour market to many individuals are weak and uncertain (Keep, 2009).

Over-qualification and Underemployment

There is also mounting evidence that the supply of skills may be outstripping the level of demand within the economy, with the result that an increasing number of people find themselves in jobs that require lower levels of skill and qualification than they possess (for a useful discussion of this trend see UKCES, 2010: 75-77; and for detailed figures on its extent, see Felstead et al, 2007; Green and Zhu, 2008; and Sutherland, 2009). The headline figures from the Skills Survey are stark – in 1986 the proportion of respondents reporting themselves as holding qualifications at a higher level than those needed to obtain and undertake their current job stood at 29.3 per cent. By 2006 this figure had risen to 39.6 per cent (Felstead et al, 2007). Sutherland (2009), using Workplace Employment Relations Survey (WERS) data, found around half of all workers felt themselves to have skills higher than those needed for their current job.

These problems look set to worsen for two reasons. First, unemployment means that more and more people are being urged to 'trade down' in terms of the skill and pay levels of the job offers they accept – indeed trading down has been given as explicit advice to new graduates entering the labour market in 2009 and 2010 (see, for example, Curtis, 2009). Second, UKCES have drawn attention to:

OECD data which showed that the supply of higher skills in the UK has been increasing at a faster rate than demand. Indeed, when we look at changes in skill supply compared to skills demand, we find that the former has grown in recent years at fully six times the rate of the latter. Moreover, we find that the growth in skills demand is one of the lowest in the OECD. Such trends provide something of a 'level indicator' of potential future imbalances between high skill levels availability and skills demand (i.e. a potential over-supply or deficient demand, for high level skills, which would represent underemployment of some/many of those with high level skills unless the growth of supply is shared, or growth of demand stimulated). (UKCES, 2010: 76).

Job Quality

Another emerging tension is a growing concern about the basic quality of some jobs on offer in the UK labour market, partly in terms of pay and partly in terms of opportunities for skill acquisition and progression. The picture is complex (see Maguire, 2010 for an illuminating investigation of the reality behind the apparently simple concept of Jobs Without Training for young people), but there are plainly major problems within some parts of the labour market.

At the upper end of the occupational spectrum there is mounting evidence that what were hitherto regarded as jobs occupied by knowledge workers who possessed a reasonable degree of autonomy and discretion are increasingly being routinised and Taylorised via the use of ICT (see Brown, Ashton and Lauder, 2010; and Brown, Lauder and Ashton, 2010 for a much more detailed discussion of this phenomenon). At the lower end of the labour market growing concern has come to centre on the quality of much of the employment available, in terms of levels of pay, job security, intrinsic interest and job satisfaction, and opportunities for development and progression. A mounting body of evidence points to large numbers of jobs where work is poorly rewarded, dull, routinised and repetitive, stressful, and offers poor opportunities for training and development and minimal chances of progression (see Lloyd, Mason and Mayhew, 2008; various contributors to Bolton and Houlihan, 2009; Toynbee, 2003; and Lawton, 2009). Issues around in-work poverty and its contribution to child poverty, and the problems of insecure employment leading to endless cycling between low-quality work and unemployment have also been gaining prominence (see Metcalf and Dhudwar, 2010; McQuaid, Fuertes and Richard, 2010; Tomlison and Walker, 2010; and Ray et al, 2010).

The scale of low paid work needs to be stressed. On EU definitions (earning less than two thirds the median wage) it covers about 22 per cent of the UK workforce and 33 per cent of all female employees. Moreover, forecasts suggest that the levels of such work are not set to decline and may even be growing as a proportion of employment (Lawton, 2009; UKCES, 2009a and

2010). The geographic concentration of such employment may also be rising, with good jobs and bad jobs tending to cluster in particular localities (Green and Owen, 2006, UKCES, 2010), with the result that for some students in some schools the local labour market offers extremely weak incentives to engage in post-compulsory participation (see Keep, 2009; and Keep and James, 2010b for a review of this problem). More generally, all of the above mentioned factors raise serious questions about the pattern and strength of signals and incentives that the existence of such jobs sends, both to young people contemplating post-compulsory participation, and to adults thinking of seeking to improve their stock of human capital through further education or training (Keep, 2005 and 2009; Keep and James, 2010a and b; McQuaid, Lindsay and Johnson, 2010).

Employers contributions to skill formation

As noted above, the flow of skills (at least as proxied by qualifications) from the publicly-funded E&T system has been rising quite sharply. As state-funded schools, colleges and universities deliver more and more certified units of human capital into the labour market, the issue arises of whether employers are contributing as strongly as they might to help improve national stocks and flows of skills, through industry/education collaboration, and through offering more and better training to their staff. Given the previously mentioned failure to ever resolve who should be doing (and paying) for particular activities within the E&T system, notions of what a fair share of co-contribution by employers might look like remain exceedingly hazy.

At one level the range of activities that government expects employers to engage in is dauntingly wide (see Huddleston and Keep, 1999; Keep and Stasz, forthcoming). For example, work experience for a wide variety of different student groups, involvement in curriculum and qualification design, student sponsorship, the provision of paid internships, forecasting future skill requirements, and helping improve adult basic skills (literacy and numeracy) to name just a few. However, there is little attempt by government to measure the volume or quality of such involvement, and still less by way of sanction available should it fall short of what is expected or needed.

At another level history suggests that when handed an opportunity to take a direct stake in delivering initial education and training to young entrants to the workforce, in aggregate employers have generally not 'walked the talk'. Geoffrey Holland's desire to see the Manpower Services Commission empower employers to provide a 'permanent bridge between school and work' via a world class work experience and training programme – the Youth Training Scheme in its many iterations – never managed to secure the level of employer commitment required to make the dream a lasting reality.

Similar problems have dogged apprenticeship, particularly in England (the story in Wales and Scotland is more favourable). Major problems include the re-badging of existing company initial training schemes in return for state subsidy (see James, 2010; Gove, 2010); limited employer involvement in the design and operation of the training elements within the apprenticeship (these often being delivered by external training providers (Fuller and Unwin, 2003);

too much provision being offered at Level 2 rather than Level 3 (Steedman, 2010); patchy completion rates; and a limited supply (often far less than demand) of places from employers (Steedman, 2010). Interesting, when asked on a BBC 'Analysis' programme how to encourage more employers to offer apprenticeship places, ex-director general of the CBI, Lord Digby Jones's suggestion was "Pay 'em – good, old-fashioned bribery" (BBC Radio 4, 2009: 5), and a recent CBI policy document on expanding the apprenticeship route seems to echo this with calls for yet further 'flexibility' in what employers have to offer by way of training in return for government support, and extra lines of subsidy to encourage new employers to become involved (CBI, 2010d). In essence, it can be argued that employers have not needed to make apprenticeship work as a mass, high quality route, as the alternative publicly-funded expansion of post-compulsory education, via growth in further education and a huge increase in the scale of the higher education sector (Soskice, 1993; Keep and Mayhew, 2004) has provided a more or less cost-free alternative.

The story around employer support for the skills of the adult workforce is also less than wholly rosy. Here work by NIACE is illuminating. They, as part of their inquiry into the future of lifelong learning (Schuller and Watson, 2009), commissioned new research to try to calculate the relative contributions by different stakeholders to the costs of adult learning provision. There is not space to go into the findings that emerged in any detail here, but the key outcome has been to suggest that the private sector employer contribution to adult and continuing training, at least as measured by expenditure, is somewhat smaller than many might have expected. By deploying headline figures derived from the National Employers Skills Survey (UKCES, 2009b) of a £39 billion employer investment in skills the CBI and others were able to claim that employer contributions to upskilling the UK dwarfed those being made by the state in directly supporting FE and HE. However, closer analysis indicates that, once the taxpayer funded contribution made by public sector employers such as the armed forces and the National Health Service are included, the balance looks somewhat different, with the state, in its various guises, actually putting up the lion's share of the investment in human capital (Williams, McNair and Aldridge, 2010). The NIACE analysis also suggests that when the contribution of time by individual trainees/learners is included, the share of the overall cost of adult and post-compulsory learning being borne by them also rises sharply.

Perhaps the most striking finding that relates to the employer contribution to the upskilling of the employed workforce comes from recent work by Mason and Bishop (2010) which, using Labour Force Survey data, indicates that across the UK workforce as a whole average levels of job-related training tended to decline from about 2000 onwards, and have now returned to levels last witnessed in 1993. Given the levels of exhortation directed at employers, all the efforts to 'make the case for training' to employers, and the increasing volume of public subsidy being offered to them to engage in training, this is an exceedingly depressing outcome. It suggests that government policy has failed to have much (if any) real impact on employers' decisions to invest in training, and that the much vaunted and long anticipated step change in

investment in skills that has formed the centrepiece objective for government policy for the last decade or so (H M Treasury, 2002; Leitch Review, 2006; UKCES, 2010) remains as distant a prospect as ever.

All of the issues outlined above raise serious questions about the roles and responsibilities of employers, and about the importance of levels of demand for skill within the economy and the proper utilisation of skills within the workplace. The quality of some of the jobs that employers are asking the E&T system to help them to fill is now plainly a legitimate point for debate, as are employers' recruitment and selection policies and practices (Keep and James, 2010b) and the signals that these send to individuals. In a world of public austerity and severely constrained E&T budgets, the limited direct role played by employers is also liable to become a bone of contention. All of these developments have major implications for the structure and tenor of the industry/education debate. It is to this final point that we now turn.

RESTRUCTURING THE TERMS OF THE DEBATE

This paper has suggested that the Industry/Education debate covers a number of fields of potential conflict of interest between a range of parties. It also now takes place at the interface where the tectonic plates of two competing discourses or explanatory narratives about the fundamental nature of the UK's 'skills problem' bump up against one another. The traditional story around a persistent failure of skills supply and by weaknesses inside schools, colleges and universities, has increasingly been contested by research that suggests that the problem is not one of supply alone, and that there are at least as significant a set of problems with underlying levels of demand for skill within the labour market and the poor utilisation of skill within many workplaces. This latter narrative, which until recently was one embraced only by researchers, has, of late, become more widely incorporated into policy thinking, particularly in Scotland (2007), but also within the thinking of the UK-wide UK Commission for Employment and Skills.

The arrival of an alternative explanation for our relatively poor standing in various international league tables on E&T outcomes has major long-term implications for industry/education debates. As noted above, the traditional discourse has been one predicated on a deficit model, where education was not doing what was needed by employers, with deleterious consequences for individuals, firms and the wider economy (Gleeson and Keep, 2004) and that the primary responsibility for change rested with E&T providers. Plainly the new explanatory narrative tends to put the ball back into the court of the employers.

A Game Which Education Can Never 'Win' ?

Nothing argued in this paper should be taken as suggesting that employers, individually and collectively, do not have a legitimate stake in the outcomes of the E&T system, nor a right to ask for particular types and levels of output. It is also liable to be the case that education and training providers can do more to help build useful links with employers and do more to strengthen the employability of the students they produce. That said, rather than see statements by employers and other stakeholders about the quality and 'fit' of

students emerging from the E&T system as simple, absolute truth statements, it might be more fruitful to view them as messages that also serve as moves within a game, whereby negotiating stances are set out and wish list established.

This is because as currently constituted, the interface between industry and education represents a form of game in which those who manage the E&T system, individual E&T institutions and their staff can never 'win' and where one set of customers or stakeholders – employers – at least at a collective and rhetorical level, are never liable to be entirely satisfied with what is being produced. This is because it is not in their interests to be seen to be satisfied. As noted above, the bulk of the expansion in the supply of skills (certainly certified skills) over the last 30 years has been via skill formation undertaken at the taxpayers' expense, so when employers have asked for more and/or better it has not entailed them in additional expenditure. Indeed, from an employer's perspective it is rational to ask for public skills provision that will lead to an over-supply, because employers want a choice of candidates not direct 'matching' of supply to demand (Gleeson and Keep, 2004), and a surfeit or over-supply of skills helps depress wages.

Furthermore, a discourse of customer dissatisfaction helps keep E&T providers on the back foot, and distracts attention from what employers might be asked to contribute by way of an expanded apprenticeship route, more and better work experience, a greater direct contribution to the costs of initial E&T, and many of the wider issues about weak demand for skill, poor skill utilisation and the persistence of low quality jobs that have been discussed above. It also helps maintain the apparent need for an open UK labour market where migrant labour is always accessible and can be used as a means of lowering wages and avoiding training costs.

New Expectations and New Problems

The traditional model of how industry/education debates are structured has endured for 30 years or more. It has produced discussions that are quite narrowly framed, and often appear not to connect with wider debates concerning the supply of good jobs and its balance with less attractive forms of employment, or the division of power inside a labour market where it has increasingly become a buyer's market where at least some employers are in the happy position of seeing an over-supply of qualified labour from within the UK, a slack labour market wherein more highly qualified young people are being advised to 'trade down' and accept less appealing jobs rather than face unemployment, coupled with access to EU and non-EU migrant labour. What this paper has tried to argue is that a gradual shift in policy maker's understandings of the nature of the 'skills problem'. This is increasingly being coupled with worries about social mobility and employers' recruitment and selection practices (e.g. unpaid internships), mounting concern about child poverty and the part that low-paid employment plays in this, Living Wage campaigns, and wider perceptions that competition for decent employment opportunities is mounting (for example, for graduates). Taken together, these forces may mean that the traditional disconnect between industry/education

debates and wider considerations of how the labour market is managed and regulated may prove unsustainable in the medium term.

At the same time, the Coalition Government's policies look likely to add to this pressure. Cuts in public expenditure seem almost certain to require employers to contribute more towards the cost of some forms of E&T, with far less government subsidy available. In addition, the government appears to want to fashion policies that create incentives and obligations to encourage employers to invest in skills. The notion of obligations has been largely absent hitherto within a basically voluntaristic training system, wherein employers have been generally free to decide what they do and do not choose to undertake by way of investment in employees' skills. A first test of this new approach is liable to centre on the government's ambitious targets to increase both the number and the quality of apprenticeships (Gove, 2010).

Putting Power and Responsibility Back Into the Equation

Echoing and expanding points made in Huddleston and Keep (1999) and Gleeson and Keep (2004), this paper has sought to explore the reasons why a more balanced and nuanced way of framing debates about how industry and education can work more closely together is now overdue. Such an approach would need to acknowledge and address the asymmetrical power relationships that reside both within the industry/education relationship as previously constructed, and within a deregulated UK labour market where employee rights and 'voice' are relatively weak. It would also encompass a clearer recognition of, and analytical framework for, mediating competing claims and constructing a stronger consensus about the way forwards. This would include a greater degree of honesty about the problems of reconciling competing needs and claims from employers upon finite or scarce resources (gifted students (however defined), curriculum time, teaching resources, student places within particular subject areas, access to institutions that confer labour market advantages and so on. Parties would be required to acknowledge that there are issues on both sides – for E&T to try to provide future workers and citizens who are better prepared for adult life (in and out of the workplace), and for employers to make greater efforts to provide both more and better jobs. Arrangements would almost certainly work better if framed within a clear, well-understood and widely accepted model of a mutual rights, roles and responsibilities that applied to all the parties involved.

Achieving this new dispensation will not be at all easy. Many of the structural factors, particularly around firm ownership, the pressure for short term profit and the legacy of long-established and accepted expectations about the limited role for employers in initial E&T, will all make progress hard to achieve. Nevertheless, given the significant advances that industry/education liaison and collaboration has made at the grassroots level over the last three decades, achieving this broader settlement is the next logical step.

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