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**SKILL AND QUALIFICATION: THE CONTRIBUTION OF NVQs TO RAISING
SKILL LEVELS**

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SKILL AND QUALIFICATIONS: THE CONTRIBUTION OF NVQs TO RAISING SKILL LEVELS

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Abstract

This paper is an evaluation of the British system of National Vocational Qualifications (NVQs) which focuses specifically on their capacity to increase the skill levels of the working population. It reviews the way that NVQs were designed and developed and argues that they are ill-equipped to encourage knowledge and skills, partly because they simply replicate the weaknesses which currently exist in the labour market and partly because of the qualifications' own focus on observed workplace behaviours. NVQs were intended to be 'employer-led' and the assumptions which underpin their design are unitarist. In contrast, the German apprenticeship system is developed and implemented by pluralist consortia of employers, trade unions, educationalists and regional governments. The qualifications which result are far better equipped to support skill levels than are NVQs.

Despite the apparent consensus that increasing skill levels benefit individuals, organisations and the economy as a whole there has long been overwhelming evidence of reported skills' shortages in Britain (Penn, 1999). Until very recently the majority of young people left the education system at the first moment they could legally do so, most without any formal qualifications (Keep, 1994); and no national system of vocational education and training existed to remedy this deficit by developing skills in the workplace. As a result, as Finegold and Soskice (1988) argue, the British labour market became a 'low-skills equilibrium'. This is a matter for some concern. Not only does the existence of low-skilled and poorly paid work create a demand for cheap, low-margin products (and, through this, more low-skilled, poorly paid 'jobs'), but also, large numbers of unskilled workers make it difficult to deploy what skills there are effectively. Even in workplaces where training is provided skilled employees might find their time taken up with remedial problem solving for their unskilled colleagues, a process as frustrating for them as it is costly for their employers (Steedman *et al.*, 1991).

One of the official vehicles for increasing skills in the workplace is the system of National Vocational Qualifications (NVQs). In an area characterised by numerous short-lived interventions (Keep, 1987) these awards have been notable for their longevity (although their relative importance has declined substantially, see, for example PIU, 2001). Official funding, originally provided as seed-corn monies to develop and market the qualifications, has been maintained (DfEE, 1995, 1996a, 1996b) and other initiatives, such as Investors in People, Modern Apprenticeships and National Traineeships, are intended to be achieved through, or lead towards, NVQs. Bodies such as the Training and Enterprise Councils (TECs) and, latterly, Local Learning and Skills Councils (LLSCs) are required to market the qualifications and can subsidise provision; while official measures of workforce achievements describe

qualifications in terms of NVQs 'or equivalent'. NVQs are effectively seen as both a means of up-skilling the working population and the way that those skills can be measured.

Yet as Steiger (1993) argues, qualifications are not themselves skills but a *proxy* for skill. They are a convenient and readily understood form of shorthand included in almost every definition of skill (see, among others, Gaillie, 1991; Noon and Blyton, 1997; Rolfe, 1990; Francis and Penn, 1994). They can help employers identify suitable employees, provide individuals with portable credentials and give occupational groups bargaining power, but each of these advantages stems from the skills that qualifications are assumed to certify not the simple fact that qualifications exist. Accordingly, as Steedman (1993) argues, the principal measure of NVQs' success should be their capacity to increase the skill levels of those in work rather than the number of certificates issued.

It is that capacity that this article seeks to assess. Given the centrality of NVQs to official interventions this is an important evaluation. Here it will be argued that, not only have NVQs not succeeded in raising skill levels but that the reasons for this failure are structural and lie within the design of the qualifications themselves. Firstly, NVQs were designed to be 'employer-led' (Jessup, 1991), to accurately describe the level of competence needed in the workplace (Debling, 1989; Mitchell, 1989). Yet this assumes that the current system of work design and skill utilisation is optimal. In a labour market characterised by low skills, qualifications based on the current situation may simply reflect and reproduce existing weaknesses. The second reason for failure is because NVQs focus only on behaviour (Jessup, 1991; Fletcher, 1991) and, as a result, do not encompass the skills and knowledge needed in employment. In order to provide a foil for the discussion, this article compares NVQs to the German apprenticeship system. This leads to a series of qualifications that are designed by all

the various parties to the employment relationship, and it is argued that such a process is a far more effective model for developing skills than one that is focused on workplace behaviours.

NVQs: background and qualifications

The original remit of the National Council for Vocational Qualifications (NCVQ) was to construct a framework based on existing awards, ensure that all vocational qualifications met certain stated criteria and accredit them in a national framework (Raggatt and Williams, 1999). There is little doubt that this was badly needed. Qualifications help the labour market to function efficiently, enabling employers and employees to find one another. Clearly, to do this effectively, certificates need to be readily recognised. Yet the provision and assessment of vocational education and training in Britain is (and was) fragmented. Qualifications have been variously designed and propagated by occupational bodies, professional organisations, specialist examining institutes, trade unions, employers, colleges and universities (among others). They vary in form, content and skill-levels and, while some have gained a wide currency, many others have not. Some indication of the proliferation of certificates can be gauged by the fact that in 1990 there were 279 secretarial qualifications offered by 11 examination boards at 5 different levels (Employment Department, 1992 cited in Keep, 1994:311). This wealth of provision was not replicated across all areas of the economy with the result that, while some occupations boasted so many qualifications that the idea of choice was rendered almost meaningless, others had none. A readily understood overarching national framework was badly needed.

However, the NCVQ interpreted its remit as overseeing the development of one particular type of award, the NVQ, and ensuring that this dominated provision. The ‘revolutionary’ (Burke, 1989) feature of these new qualifications was the way that they were structured.

Instead of prescribing a course of instruction, laying down a syllabus or specifying a minimum period of work and study, NVQs simply described the behaviours that a competent worker should display in any given job (Debling, 1989). This description was the pivotal part of the new system. Aware that they were devising qualifications for a market that generally lacked them, the developers of NVQs were anxious to recognise competence independently of the way such competence had been acquired. By detailing 'competences' and 'standards' in the form of behaviours which could be observed in the workplace they hoped to ensure that workers who were already skilled (through years of experience on the job) could gain the qualifications as readily as those who embarked on a training course (Jessup, 1991). Essentially NVQs provided a form of assessment which, it was assumed, would stimulate appropriate training (Fletcher, 1991).

This was a radical departure from existing practice. The demands of the workplace and demonstrations of competence in work are key features in most forms of vocational education and training but rarely had they been the sole means of assessment (though see Hyland, 1994 for an exploration of the development of NVQs).

Achievements were rated at five different levels (with level one being the simplest and level five the most advanced) and this framework was intended to cover work-based qualifications for everyone from apprentice to board director. Large numbers of NVQs were developed with impressive speed. By 1992 NVQs had been designed for occupations that covered 80 per cent of the workforce (Raggatt and Williams, 1999). While this achievement was laudable, the National Council for Vocational Qualifications had not, as originally intended, provided the means to accredit existing qualifications. Rather, they anticipated that all qualifications could and should be re-cast into NVQ-format. It was hoped that the NVQ

framework would become well understood and easily recognisable by dominating provision rather than because it rated existing qualifications in relation to one another (Fennell, 1993).

Gaining qualifications and increasing skills

Clearly, eliminating diversity in qualifications would make the system both simpler and easier to understand (assuming that NVQs did, as intended, come to dominate provision). However, as noted above, qualifications are only a proxy for skill. NVQs had succeeded in providing qualifications for the majority of people in work but the success of these qualifications should be gauged on the extent to which they supported, facilitated and encouraged increases in skills. This success was limited. In occupations where NVQs had replaced (or provided an alternative to) existing qualifications their system of specifying behavioural ‘competences’ proved less effective at conveying and assessing technical skills and knowledge than the qualifications they replaced in almost every instance. Senker (1996) observed that NVQ level 3 in engineering covered only two-thirds of the requirements of the traditional apprenticeship. Since an NVQ could be achieved after two years, while the ‘full apprenticeship’ typically took three and a half to four years this estimate probably errs on the side of generosity. Other studies note the lowering of standards in construction (Callendar, 1992), hairdressing (Raggatt, 1994; *Dispatches* Channel 4, 1993), management (Grugulis, 1997), and electrical engineering (Smithers, 1993). While in retailing, an area that had traditionally lacked formal qualifications, NVQs have been unfavourably compared to qualifications available in France (Jarvis and Prais, 1989).

Smithers’s (1993) work, which contrasts the old City and Guilds plumbing certificate with the plumbing NVQ provides a dramatic illustration of the differences between the two qualifications. The City and Guilds qualification not only required a higher level of practical,

technical expertise, it also tested knowledge of physics, electronics, maths, technical drawing and technology. The background to technology included physical qualities, electricity and magnetism, forces, pressure, heat, thermal movement, energy, principles of tool construction and materials technology, concepts in chemistry, applied chemistry and materials for industry. The NVQ which replaced it specified none of these (Smithers, 1993). NVQ candidates and tutors could, if they chose, add a syllabus, textbooks, knowledge of theory and additional practical training to the NVQ. But there was nothing in the NVQ itself to suggest that such supplementary material was either desirable or necessary. Further, as Steedman and Hawkins (1993) argue, this presupposes levels of expertise and motivation on the part of candidates which are extremely unlikely to occur in practice.

This finding is reproduced across numerous studies and occupations (Raggatt, 1994). Not only are NVQs narrower than other qualifications they are also complicated and difficult to understand. Each qualification consists of lists of 'competences' or 'standards'. These are intended to describe observable workplace behaviour but they are written in a way which was specially designed for NVQs and which has little general currency. This 'NVQ-speak' is described, even in official reviews, as complex, confusing, difficult to understand or relate to work and inappropriate, criticisms that are extended to the guidance provided with it (Beaumont, 1995; DfEE, 1995, 1996a, 1996b). Such specialist use of language, coupled with NVQs' emphasis on the workplace, means that candidates are required to demonstrate competence in particular ways. These ways need to be conveyed and studies suggest that teaching candidates the administrative demands of the NVQ system (how evidence should be presented and 'portfolios' assembled) is time consuming. As a result, teaching time is taken up with administrative necessities rather than substantive occupationally relevant knowledge (Hyland and Weller 1994; Grugulis, 1997; Fuller and Unwin, 2001). Nor do NVQs increase

individuals' autonomy and discretion. The specification of NVQ 'standards' effectively achieves a Taylorist separation of conception and execution with the NVQs' designers deciding which actions constitute competent performance and candidates simply demonstrating that they can perform actions.

It may be that this reduction in the skills and knowledge required for certification served to bring qualifications within the reach of more people. It is certainly true that the vast majority of NVQs awarded are at the lowest level of achievement (DfEE, 2001; Robinson, 1996) and with this qualification, as with others (Payne, 1991; Steedman, 1991; Heyes and Stuart, 1996) success provides a welcome boost to confidence. Merrick (1998) quotes a room attendant in a leisure complex who maintained that gaining an NVQ at level 1 provided them with motivation to work. While research conducted in a hospital trust (Grugulis and Bevitt, 2002:5) refers to one worker who was "thrilled to bits" at her success in gaining a qualification and another who said:

I felt like I had achieved something because I never did any exams at school or anything like that. I said to my husband it must be the first thing I've ever done and completed really.

Yet, as Munro and Rainbird (2001) point out, NVQs simply certificate what staff are already doing; their studies of low-skilled workers in the NHS, almost all of whom had either completed or were working towards an NVQ at level 2, reveal that it was very unusual to come across any worker who did not already possess all the skills required. A finding which may serve to explain why many employees feel annoyed or patronised by the tasks they are required to complete for their qualifications (Grugulis and Bevitt, 2002:5). It seems, as

Smithers (1993) argued, that the qualifications introduced are simply ones that candidates can cope with rather than ones that increase their skills.

From the point of view of extending individuals' skill levels this does not look encouraging. Technical knowledge is neglected, partly because the complexities of NVQ assessment leave little time for trainers to impart it, partly because it is not explicitly specified in the qualifications, and partly because the focus on disaggregated behaviours of the NVQ standards make it difficult to include anything beyond narrowly defined tasks. Set against this, the acquisition of certificates may be valued by those who have few qualifications. NVQs may have little effect on skill levels but they are open access.

Assessment and 'employer-led' skills

Nor does the evidence suggest that the disadvantages experienced by individuals are offset by the benefits which accrue to employers. Indeed, most activity is concentrated in the (fluid boundaries of) the public sector, the armed services and retailing (Spilsbury *et al.*, 1995; Matlay, 2000). According to official figures, 18 per cent of employers aware of NVQs (and just over 16 per cent of all employers) used these qualifications with one or more of their employees (DfEE, 2000a). The 2001 figures, which exclude the smallest firms, raise this figure to 34 per cent (DfES, 2002). Most employers see the NVQ process as cumbersome and bureaucratic (Beaumont, 1995) with little relevance to 'real' work.

There is some evidence to support these criticisms. NVQs make their claim to relevance on the basis that they describe the actions which should be performed in any given occupation. Yet, as Senker (1996) argues, neither in theory nor in practice is work organised on a sectoral basis. Jobs may be and are designed in a different way from company to company and even

from person to person. The employment contract is incomplete since attempting to specify exactly what employees should do is likely to be dysfunctional. While it is clearly a valuable and useful exercise to consider the function of work, explore the aims of an occupation and review the rationale for particular tasks (not least because these processes may help to inform decision making), such broad conclusions are probably beyond behaviourally specific ‘competences’. Paradoxically, it seems that the concern to make these qualifications ‘relevant’ has resulted in their exclusive preoccupation with behaviours and actions (which are not centrally dictated) in place of more broadly constituted skills and knowledge (which might be of interest to a whole occupational sector or industry).

In NVQs, emphasis is taken from the overall meaning and function of work to the minutiae of its application. So the managers in Grugulis’s (2000) study gained units towards their qualification for arranging their offices in an ergonomic way (with the computer, filing cabinet and telephone all within easy reach) or ordering name badges for staff rather than the more substantive managerial tasks (developing IT systems and negotiating pay rates) that each was involved in because the first set of actions, though trivial, met the wording of the standards while the second set, though important and substantive, did not.

Appropriate standards of performance are not immediately apparent to assessors working from NVQ performance criteria. Wolf (1995:25) provides a (dramatic) illustration of this by reproducing element 9.1 *Obtain and evaluate information to aid decision making* from the MCI’s NVQ level 5 for senior managers which is intended to describe high level, complex work (Fig. 1). These behaviours, ostensibly drawn from the activities of managers could as easily be used to describe the responsibilities of the porter at an office reception desk. It is far

easier to assess work when the assessors are also supplied with exemplars, set texts and guidance (Wolf and Silver 1986; Eraut and Cole, 1993).

Element 9.1 Obtain and evaluate information to aid decision making	
(a)	Information requirements are identified accurately and re-evaluated at suitable intervals
(b)	Information is sought on all relevant factors affecting current or potential operations
(c)	Information is relevant and is collected in time to be of use
(d)	A variety of sources of information are regularly reviewed for usefulness, reliability and cost
(e)	Opportunities are taken to establish and maintain contacts with those who may provide useful information
(f)	Methods of obtaining information are periodically evaluated and improved where necessary
(g)	When normal information routes are blocked, alternative methods are tried
(h)	Information is organised into a suitable form to aid decision making
(i)	Conclusions drawn from relevant information are based on reasoned argument and appropriate evidence

Fig. 1: Management, level 5 element 3.2 Source: MCI (1991)

It seems that listing behaviours in this way does not help either employees or employers assess the significance of actions. It does, however, provide a multiplicity of criteria for assessors to gauge competence against. Eraut *et al.* (1996) estimate that, even the lowest level NVQ involves something like one thousand separate assessment decisions. Since, in the NVQ system, the ultimate test of ‘competence’ is whether a candidate has met the letter of the standards, examples of disingenuous casuistry and innocent ignorance are not hard to find.

Small wonder then that this study concluded that making assessment decisions coherent was an impossible task.

There is little to suggest that these bureaucratic audits either ensure quality (in the sense of providing that the candidate is capable at the task on which they are being assessed) or provide the basis for meaningful and consistent judgements. Moreover it is extremely probable that it explains much of the reluctance of businesses, particularly SMEs (Matlay, 2000) to deliver NVQs. It may be attractive to attempt to reduce every act of every workman to a science (Taylor, 1949) but this form of rationality is spurious and distorts work processes and the workplace far more than it illuminates (Doray, 1988; Popham, 1984; Barnett, 1994). Qualifications based on these assumptions can provide little room for individual growth and few links to the meaning of work.

Alternative models of qualification

This wide-scale experiment with a new model of qualifications is all the more surprising when set against more successful forms of vocational education and training. The highly regarded German apprenticeship system, which is one of the best known routes to achieving vocational qualifications, is based on very different assumptions to those which underpin NVQs. Full apprenticeships last three years and little attempt is made during this period to specify workplace actions and behaviours. Rather, candidates are taught technical skills in the classroom which are subsequently developed through participation in a series of problem-solving activities, graded in terms of difficulty. Care is taken to ensure that apprentices are exposed to a full range of different work situations with central training centres supplementing workplace experience and providing additional workplace settings for trainees to work in; an arrangement which gives smaller employers the capacity to offer high level

training. Technical training is supplemented with knowledge of work control and design (manufacturing qualifications involve familiarity with costs, design and planning, and administration and production) and, in addition to this, all apprentices are required to continue to participate in further education for the duration of their vocational studies (Lane, 1989; Marsden and Ryan, 1995; Streeck *et al.*, 1987; though see also Culpepper, 1999).

This system is made possible by the sharing of costs between the various parties to the employment relationship. Apprentices in Germany are paid comparatively low wages (and, in contrast to Britain since 1970, there is little pressure on employers to raise apprenticeship pay, Marsden and Ryan, 1995). Moreover funding is provided by both employers and the state; each of whom has a voice, together with the relevant trade unions, in the design of qualifications. Industrial training in Germany is seen as a valuable societal resource to be pursued in the public interest; as training for citizenship beyond the narrow economic interest of individual firms (Green, 1998; Lane, 1989).

Clearly apprentices are one small section of the workforce and, to a certain extent, it is disingenuous to compare a system of apprenticeship training with vocational qualifications which set out to provide certification for everyone in employment. But the purpose of this comparison is not to confine vocational awards to those at the start of their careers, rather it hopes to demonstrate that it is possible to design qualifications that are rigorous, include both academic and technical skills and enjoy high status. If policymakers and practitioners are seeking models to base vocational qualifications on, this combination of technical and academic input and guided experience might provide a robust basis for increasing skills. Interestingly, Modern Apprenticeships in Britain include a far wider variety of provision than their German counterparts with some examples of excellent training in the traditional

industries (Fuller and Unwin, 2001). Recent official revisions have incorporated a compulsory technical certificate into both the Modern Apprenticeship and the Foundation Modern Apprenticeship to equip candidates with theoretical and technical knowledge, with NVQs as optional 'extras' (DfEE, 2000b; DfES, 2001). When the initiative was launched, it was the technical certificate that was considered an optional extra.

Yet it would be wrong to dismiss the contrast between the British and German systems as entirely the product of funding. The NVQ system was, after all, devised by civil servants (Burke, 1989) and state funded (DfEE, 1995, 1996a, 1996b; Wolf, 1996). The phrase 'employer-led' was one of their aspirations, not a description of the qualifications' designers. It may be that the failure of NVQs is the result of a poverty of theory. The German system is designed, implemented and assessed by consortia of trade unions, employers (and their associations) and the state. It is recognised that each may want different things from the qualification and that each is a legitimate participant. Education is deemed as necessary as the encouragement of vocational skills and developers are legally required to include it. The emphasis here is on a working lifetime and full participation in citizenship and, as Prais *et al.* (1991) argue it is these increased levels of skill that enable German firms to compete more effectively. The British system, by contrast, draws entirely on unitarist assumptions with the needs and contributions of employees, unions, occupational groups, education and the state all subsumed into the needs of employers. The objectives of each of these groups are deemed to be synonymous. Add to this the Behaviourist and Taylorist assumptions on the way it is possible to control actions and what may be read into those actions and it is not difficult to see that NVQs are ill equipped to develop skills.

Discussion and Conclusions

NVQs never did come to dominate vocational qualifications. By 1999 - 2000, according to official figures, they accounted for just under 47 per cent of vocational qualifications awarded (DfEE, 2001). However, since this percentage only includes certificates issued by the largest three awarding bodies as 'other vocational qualifications' and since (as noted above) the system of awards in Britain is fragmented, it almost certainly overstates the proportion of NVQs. Robinson (1996), using more reliable (if now rather dated) figures, calculated that NVQs accounted for only 35 per cent of vocational qualifications. It is not, as surveys have made clear, that employers do not know about NVQs, it is that they do not consider them useful (Spilsbury *et al.*, 1995).

This is not to argue that the NVQ system has had no successes. Some 3.3 million qualifications had been awarded by the summer of 2001 (<http://www.qca.org.uk>), many for occupations which had no means of accreditation prior to the launch of this system. But most NVQs issued are at levels one and two, the most basic standards of achievement. In part this is because, as Raggatt and Williams (1999) pointed out, these qualifications were successfully resisted by professional bodies, but it is also because NVQs are not designed in a way that effectively supports skill development and that problem is most glaringly apparent at higher levels (Grugulis, 2000).

Certification that is (whether by accident or design) concentrated at the lowest levels of achievement does have certain advantages, not least the inclusion of people with few or no previous qualifications. This is a welcome development. It should be an aim of any qualifications system to encourage participation. But certification is not valuable for its own sake, if it were then qualifications might as easily be distributed on street corners. Rather,

counting the number of awards issued is of interest because of what these awards are assumed to certify. Vocational qualifications might provide people with new skills or develop their existing ones; they might convey information and encourage the development of knowledge about a particular occupation; succeeding in this process could increase candidates' confidence; and qualifications might facilitate access to other jobs or lead to further progress in the education system. Following Steedman (1993), NVQs should be judged, not on the numbers of certificates that are issued in their name, but on the extent to which these certificates have raised the skill levels of people in work. On this criterion NVQs cannot be said to have succeeded, nor is it possible to see how they could do so since they are designed to eliminate knowledge and focus on behaviours exhibited in the current job. As Grimshaw *et al.* (forthcoming) argue, such a qualification is, at best, appropriate only for "horizontal movement within a limited job grade" (see also Munro and Rainbird, 2001). An opportunity to increase the skills of those most disadvantaged in the labour market has been missed and NVQs effectively put a ceiling on progress rather than acting as a springboard to further attainment.

Many of the system's problems stem from the notion that it should be 'employer led' and the belief that employers' experience with managing and designing work might be extended to managing and designing qualifications. Yet this presupposes that work is currently designed in the optimum way, a conclusion that researchers into skills have cast doubt on (Clarke and Hermann, 2001; Keep and Mayhew 1996; Lloyd and Payne 2001). In the British labour market, unskilled work is common and managers are likely to be comparatively poorly educated and trained (Bosworth, 1999). There is no strong tradition of vocational education and training and many organisations have little idea of how training might be effectively implemented (Edwards *et al.*, 2001). In such an environment, a system based on current

behaviours is more likely to replicate existing weaknesses than fundamentally up-skill. Lower level qualifications were growing in importance before the introduction of these qualifications (Steedman, 1993; Raggatt and Williams, 1999); and this trend was probably exacerbated by NVQs. As Penn (1999) points out, employers generally respond only to short-term skills needs, usually in an *ad hoc* way. Few, if any, plan skills formation and development over more than two years. There have always been pockets of excellence (Keep, 1989) but these have rarely influenced general practice. Given this, it may be appropriate question the centrality of employers in the current vocational training system (Keep and Mayhew, 1996). It is, as Armstrong (1987) argues, rather like expecting those responsible for communicating a disease to heal it.

NVQ design also assumes that employers can and do articulate the demands of work in such a way as to satisfy not only their own interests but also those of employees. This is a highly unitarist interpretation of the nature of work. It is also inaccurate, particularly with reference to skills. The workplace is a contested terrain (Edwards, 1979) and the immediate and short term needs of an individual employer may not be what is best for workers, nor the state nor even (as the results here have suggested) for the individual employers themselves.

Clearly, the nature of the British labour market raises issues that go beyond the design and evaluation of a particular set of qualifications and may well be beyond the capacity of any supply side intervention, however well designed, to 'solve'. Clearly too, employers have a legitimate interest in the design and implementation of vocational qualifications but they are not the only interested parties and their interests should not be allowed to override those of other stakeholders. It is one thing to observe that, left to themselves, employers are unlikely

to develop broad-based skills in their employees. It is quite another to develop a system of qualifications that neglects those broad-based skills entirely.

However, if we confine our attention to the design and implementation of robust and rigorous vocational qualifications, then the problem is far from being insoluble. Granted, it is unlikely that amendments to the current system will be fruitful, but there are other models of skill development and certification which are worthy of attention. NVQs were designed by civil servants in consultation with employers and were intended to meet the needs of employers. Vocational qualifications in Germany are designed by employers' associations, regional governments, trade unions and educationalists and this system owes its success to the expertise of all. British policymakers would be well advised to call a halt to their current costly and revolutionary experiment and divert some of the extensive state subsidy NVQs have received to creating and supporting a more robust system of vocational qualifications.

References

- Armstrong, P. (1987) 'The abandonment of productive intervention in management teaching syllabi: an historical analysis' Warwick Papers in Industrial Relations No. 15 Coventry:University of Warwick
- Barnett, R. (1994) *The Limits of Competence: Knowledge, Higher Education and Society* Buckingham: The Society for Research into Higher Education and Open University Press
- Beaumont, G. (1995) *Review of 100 NVQs and SVQs* London:NCVQ/SCOTVEC
- Bennett, R., Glennerster, H. and Nevison, D. (1992) *Learning Should Pay* Poole, British Petroleum
- Black, H. and Wolf, A. (eds.) (1990) *Knowledge and Competence* Sheffield:Employment Department
- Bosworth, D. (1999) *Empirical Evidence of Management Skills in the UK* Sheffield: DfEE Working Paper
- Burke, J.W. (1989) 'Introduction' in Burke, J.W. (ed.) *Competency Based Education and Training* London:Falmer
- Callendar, C. (1992) *Will NVQs Work? Evidence from the Construction Industry* Sussex:University of Sussex/Institute of Manpower Studies
- Clarke, L. and Hermann, G. (2001) 'Cost versus production: disparities in construction processes in Europe' Paper presented at the Labour Process Conference, Royal Holloway, University of London 26th – 28th March
- Culpepper, P.D. (1999) 'The future of the high-skill equilibrium in Germany' *Oxford Review of Economic Policy* 15 (1) pp 43 - 59
- Debling, G. (1989) 'The Employment Department/Training Agency standards programme and NVQs: implications for education' in Burke, J.W. (ed.) *Competency Based Education and Training* London:Falmer

Department for Education and Employment (1995) *NCVQ 1995 Quinquennial Review Stage One Report* Sheffield:DfEE

Department for Education and Employment (1996a) *NCVQ 1996 Quinquennial Review Executive Summary* Sheffield:DfEE

Department for Education and Employment (1996b) *NCVQ 1995 - 1996 Quinquennial Review Stage Two Report* Sheffield:DfEE

Department for Education and Employment (2000a) *Learning and Training at Work 2000* London:DfEE

Department for Education and Employment (2000b) *Modern Apprenticeships Consultation Document* Sudbury:DfEE

Department for Education and Employment (2001) *Statistics of Education: Vocational Qualifications in the UK 1999 – 2000* London:DfEE

Department for Education and Skills (2001) *Modern Apprenticeships: The Way to Work* Sudbury:DfES

Department for Education and Skills (2002) *Learning and Training at Work 2001* London:DfES

Doray, B. (1988) *From Taylorism to Fordism, A Rational Madness* London:Free Association Books

Edwards, P., Arrowsmith, J., Gilman, M. and Ram, M. (2001) 'In search of institutions: small firms, labour regulation and the missing middle' Paper presented at the *Work, Employment and Society* conference Nottingham University, 11th - 13th September

Eraut, M. and Cole, G. (1993) *Assessing Competence in the Professions* Technical Report Number 14 Sheffield:Employment Department, Methods Strategy Unit

Eraut, M., Steadman, S., Trill, J. and Parkes, J. (1996) *The Assessment of NVQs* Research Report No. 4 Brighton:University of Sussex

- Fennell, E. (1993) 'As others will see us: the UK's qualifications system' *Competence and Assessment* 23 pp 20 - 21
- Finegold, D. and Soskice, D. (1988). 'The failure of training in Britain: Analysis and Prescription' *Oxford Review of Economic Policy* 4: 3, 21 - 43
- Fletcher, S. (1991) *NVQs Standards and Competence* London:Kogan Page
- Francis, B. and Penn, R. (1994) 'Towards a phenomenology of skill' in Penn, R., Rose, M. and Rubery, J. (eds.) *Skill and Occupational Change* Oxford: Oxford University Press
- Fuller, A. and Unwin, L. (2001) *From Cordwainers to Customer Service: the Changing Relationship between Apprentices, Employers and Communities in England* Oxford and Warwick Universities: ESRC funded Centre on Skills, Knowledge and Organisational Performance
- Gaillie, D. (1991) 'Patterns of skill change: upskilling, deskilling or the polarization of skills?' *Work, Employment and Society* 5 (3) pp 319 - 51
- Green, A. (1998) 'Core skills, key skills and general culture: in search of a common foundation for general education' *Education and Research in Education* 12 (1)
- Grimshaw, D., Beynon, H., Rubery, J. and Ward, K. (forthcoming) 'The restructuring of career paths in large service sector organisations: "delaying", up-skilling and polarisation' *Sociological Review*
- Grugulis, I. (1997). 'The consequences of competence:a critical assessment of the Management NVQ' *Personnel Review* 26: 6, 428 - 444
- Grugulis, I. (2000) 'The Management NVQ: a critique of the myth of relevance' *Journal of Vocational Education and Training* 52 (1) pp 79 – 99
- Grugulis, I. and Bevitt, S. (2002) 'The impact of Investors in People on employees: a case study of a hospital trust' *Human Resource Management Journal*
- Heyes, J. and Stuart, M. (1996) 'Does training matter? Employee experiences and attitudes' *Human Resource Management Journal* 6 (3) pp 7 – 21
- Hyland, T. (1994) *Competence, Education and NVQs* London:Cassell

- Hyland, T. and Weller, P. (1994) *Implementing NVQs in Further Education Colleges* Warwick University: Continuing Education Research Centre
- Jarvis, V. and Prais, S. (1989) 'Two nations of shopkeepers: training for retailing in France and Britain' *National Institute Economic Review* 128, 58 - 75
- Jessup, G. (1991) *Outcomes: NVQs and the emerging model of education and training* London: The Falmer Press
- Keep, E. (1987) *Britain's Attempts to Create a National Vocational Educational and Training System: A Review of Progress* Warwick Papers in Industrial Relations Number 16 Coventry:University of Warwick
- Keep, E. (1989) 'Corporate training strategies: the vital component?' in Storey, J. (ed.) *New Perspectives on Human Resource Management* London:Routledge
- Keep, E. (1994) 'Vocational education and training for the young' in Sisson, K. (ed.) *Personnel Management* Oxford:Blackwell
- Lane, C. (1989) *Management and Labour in Europe* Aldershot:Edward Elgar
- Management Charter Initiative, (1991) *Occupational Standards for Managers: Management II and Assessment Guidance* London:MCI
- Marsden, D. and Ryan, P. (1995) 'Work, labour markets and vocational preparation: Anglo-German comparisons of training in intermediate skills' in Bash, L. and Green, A. *Youth, Education and Work* World Yearbook of Education, Kogan Page
- Matlay, H. (2000) 'S/NVQs in Britain: employer-led or ignored?' *Journal of Vocational Education and Training* 52 (1) pp 135 – 147
- Merrick, N. (1998) 'The leisure angle' *People Management* 11 June, pp 36 – 38
- Mitchell, L. (1989) 'The defining of standards and their assessment' in Burke, J.W. (ed.) *Competency Based Education and Training* London:Falmer

- Munro, A. and Rainbird, H. (2001) 'Access to workplace learning and trade union voice under different regulatory regimes: cleaning and care work' Paper presented at the *British Universities Industrial Relations Association* conference, Manchester, 7th - 9th July
- Noon, M. and Blyton, P. (1997) *The Realities of Work* London: Macmillan
- Payne, Joan. (1991) *Women, Training and the Skills Shortage* London: Policy Studies Institute
- Payne, Jonathon. (1999) *All things to all people: Changing Perceptions of 'Skill' among Britain's Policy-Makers since the 1950s and their Implications* Oxford and Warwick Universities: ESRC funded Centre on Skills, Knowledge and Organisational Performance
- Penn, R. (1999) 'The dynamics of decision-making in the sphere of skills' formation' *Sociology* 33 (3) pp 621 – 638
- Performance and Innovation Unit (2001) *In Demand: Adult Skills in the 21st Century* London: PIU
- Popham, J. (1984) 'Specifying the domain of content or behaviours' in Berk, R.A. (ed.) *A Guide to Criterion-Referenced Test Construction* Baltimore: John Hopkins Press
- Prais, S.J., Jarvis, V. and Wagner, K. (1991) 'Productivity and vocational skills in services in Britain and Germany' in Ryan, P. (ed) *International Comparisons of Vocational Education and Training for Intermediate Skills* Falmer: London
- Raggatt, P. (1994) 'Implementing NVQs in colleges: progress, perceptions and issues' *Journal of Further and Higher Education* 18 (1) pp 59 - 74
- Raggatt, P. and Williams, S. (1999) *Government, Markets and Vocational Qualifications: An Anatomy of Policy* London: Falmer Press
- Rolfe, H. (1990) 'In the name of progress? Skill and attitudes towards technological change' *New Technology, Work and Employment* 5 (2) pp 107 - 21
- Senker, P. (1996) 'The development and implementation of National Vocational Qualifications: an engineering case study' *New Technology, Work and Employment* 11 (2) pp 83 - 95

Smithers, A. (1993) *All our Futures* London:Channel 4 Television

Spilsbury, M., Moralee, J. and Evans, C. (1995) *Employers' Use of the NVQ System* Brighton:Institute for Employment Studies

Steedman, H. (1993) 'Do workforce skills matter?' *British Journal of Industrial Relations* 31 (2) pp 285 – 292

Steedman, H. and Hawkins, J. (1993) *Mathematics in Vocational Youth Training for the Building Trades in Britain, France and Germany* National Institute of Economic and Social Research

Steedman, H., Mason, G. and Wagner, K. (1991) 'Intermediate skills in the workplace: deployment, standards and supply in Britain, France and Germany' *National Institute Economic Review*, no. 136:60 – 76

Steiger, T.L. (1993) 'Construction skill and skill construction' *Work, Employment and Society* 7 (4) pp 535 – 560

Streeck, W., Hilber, J., van Kevalaer, K., Maier, F. and Weber, H. (1987) *The Role of the Social Partners in Vocational Education and Training in the FRG* Berlin:CEDEFOP

Taylor, F. W. (1949) *Scientific Management* London:Harper and Row

Wolf, A. (1995) *Competence-Based Assessment* Buckingham and Philadelphia:Open University Press

Wolf, A. (1996) 'The cost of the NVQ Programme' appendix 4 in Robinson, P. *Rhetoric and Reality: Britain's New Vocational Qualifications* Centre for Economic Performance London:London School of Economics

Wolf, A. and Silver, R. (1986) *Work Based Learning: Trainee Assessment by Supervisors* Research and Development Series Number 33 Sheffield:MSC