Journal of Education Policy
Vol. 21, No. 5, September 2006, pp. 535–565

Certifying the workforce: economic imperative or failed social policy?

Alison Wolf[a]*, Andrew Jenkins[b] and Anna Vignoles[b]
[a]*King's College London, UK;* [b]*Institute of Education, University of London, UK*

The education policies of governments have become increasingly directed towards economic ends, including the development of workforce skills. UK governments have been particularly committed to such policies and have adopted some quite distinctive tools, relying heavily on targets and emphasizing certificated rather than uncertificated learning. The underlying assumptions of such policies have been subject to sustained critique, but there has been relatively little empirical evidence available regarding their impact on individual adult learners. This paper uses a large national longitudinal data set to examine whether governments in the UK have met their objectives and how far these are consistent with the learners' own. It provides, in particular, detailed information on the factors affecting acquisition of additional formal qualifications in adult life and whether there has been any shift in favour of the less skilled in recent years. It also examines the extent to which qualifications, and especially those prioritized by government, lead to increased earnings for their holders. The results strongly suggest that current policies are failing even on their own terms. In conclusion the paper provides some possible explanations for the findings and sets them in an international context.

Introduction

During the last quarter of the 20th century the education policies of European and North American governments became increasingly directed towards immediate economic goals, especially in the post-compulsory, further and adult sectors. This development reflected concerns over increased global competition and each country's own economic performance and has been informed by a rather simplistic version of human capital theory. The development of the population's (and so the workforce's) skills came to be regarded as both a critical, and a sure-fire, way of improving productivity. Within the education sector governments have correspondingly directed support towards the development of vocational skills and towards courses and activities of apparently direct relevance to the workplace (Green *et al.*, 2000; Grubb

*Corresponding author. Department of Management, King's College London, 150 Stamford Street, London SE1 9NH, UK. Email: alison.wolf@kcl.ac.uk

ISSN 0268–0939 (print)/ISSN 1464–5106 (online)/06/050535–31

DOI: 10.1080/02680930600866124

& Lazerson, 2004; Organisation for Economic Cooperation and Development [OECD], 2004a, b).

In Britain the policy rationale is similar to that expressed in other developed nations, but there are, nonetheless, distinctive features to the UK case. It is not simply that the country has embraced the idea of reshaping education for economic ends with particular enthusiasm (see Coffield, 2002a; Wolf, 2002). Policy has been bound up, to an unusually high degree, with debate over the whole structure of the UK economy: first, in relation to a level of performance which, until the 1990s, was markedly poorer than that of major neighbours and competitors and, more recently, over whether, in spite of apparent economic revival, the economy remains caught in a 'low skill equilibrium' which bodes ill for the future (see Keep, 1999; Coffield, 2004). In addition, the UK has been distinctive in the policy tools it has favoured, notably, as discussed below, its use of quantitative targets tied to a centrally controlled 'national qualification framework'.

The domination of education policy by economic objectives has been much remarked on in the policy literature, and the ideological perspectives underlying New Labour's policies, in particular, have been subject to detailed analysis (see especially, in this journal, articles by Coffield, 2002a, 2004; Lloyd & Payne, 2003a, b; see also Taylor, 2005). However, evaluation of the impact of policy on individuals has been constrained by a lack of detailed, micro-level data.

This paper helps to fill this gap. Following an overview of the relevant policy environment and using a combination of new and previously published findings, it discusses the experiences since 1990 of a large sample of UK adults who have undertaken formal education and training. Their experiences allow us to evaluate the impact of government policies designed to increase skill levels and formal accreditation, especially among the less skilled. The paper first looks at participation patterns and secondly examines the economic outcomes of formal, accredited training. Many of these outcomes are markedly at odds with governments' expectations and intentions. The latter part of the paper discusses possible explanations for these findings, drawing on both the national and the international context, and implications for the current policy debate.

The policy context

The idea that 'lifelong learning' is increasingly important for emerging 'learning societies' has passed into conventional wisdom. Within the European Union (EU) it was first identified formally as a strategic priority in the 1993 White Paper on *Growth, competitiveness and employment*, and the following year a White Paper on *Teaching and learning: towards the learning society* identified lifelong learning as a necessary response to the arrival of the 'information society', to internationalization (globalization) and to technical change. The European Parliament and Council declared 1996 the European Year of Lifelong Learning, identifying lifelong learning as 'a key factor … for a European model of competitiveness and growth'. The 2000 Lisbon Strategy, intended to make the EU 'the most competitive and dynamic knowledge-based

economy in the world by 2010', includes 'giving higher priority to lifelong learning as a basic component of the European social model'. In 2002 the Council agreed a resolution on lifelong learning (2002/C 163/01) reaffirming its importance and in 2004 the EU agreed on five shared education benchmarks, one of which is a target for at least 80% of 25–59-year-olds to participate in lifelong learning.

The OECD, encompassing the world's richest countries outside as well as within Europe, is an enthusiastic promoter of human capital formation as a means to growth (see, for example, OECD, 2004a) and specifically of lifelong learning, which is 'vital to sustained economic progress and social cohesion in the "new economy"' (OECD, 2000). In 1996 (the European Year of Lifelong Learning) the OECD Education Ministers adopted a mandate to 'make lifelong learning for all a reality'. An OECD Policy Brief on lifelong learning emphasized that the 'lifelong learning approach' is fuelled by the 'increased pace of globalisation and technological change' (OECD, 2004b, p. 2) and by 'serious deficiencies in skills and competencies in the OECD labour force' (p. 3).

Although learning as a means to personal fulfilment or cultural development may be mentioned in passing, the focus of such documents is overwhelmingly on productivity and economic success. It is therefore not surprising to find that governments have increasingly favoured vocational training over general education for adults. Green *et al*. (2000) reviewed education and training policy throughout the EU for the period 1985–1999 and found a uniform preoccupation with links between education and the economy and direction of funding towards overtly vocational adult programmes.

The UK, as noted above, has been particularly active in its promotion of 'education for growth'. The dominant concerns of a succession of governments and ministers are encapsulated in the following quotes, each from major White Papers:

> The Government's plans to improve and develop the education and training system [are] … a response to the rising demand from employers for more and higher level skills to meet the growing challenge from overseas competitors in world markets. (Department of Education and Science [DES], 1991, p. 1)

> Learning is the key to prosperity. Investment in human capital will be the foundation of success in the knowledge-based global economy of the twenty-first century. (Department for Education and Employment [DfEE], 1998, p. 1)

> Nationally, the UK faces a major challenge in ensuring our workforce is equipped … to compete in a global market place … we have too few people trained. (Department for Education and Skills [DfES], 2005, p. 5)

During much of the late 20th century Britain's economic problems sparked a search for culprits and remedies. Education and training failures became favourite contenders (Barnett, 1986; Prais, 1995; Sanderson, 1999). Comparisons of the qualification levels of British workers (low) and of German and French workers (high) became and indeed remain staples of policy discourse, with government determined to increase the numbers of workers with vocational qualifications as a means of raising productivity. For example, in evidence to the House of Commons Education and Skills Committee

in 2005 the DfES argued that 'If we look at the relationship between ourselves and our European competitors, I think the figure is that about 20% of the [productivity] difference between ourselves and them is down to the skills of the workforce' (House of Commons Education and Skills Committee, 2005, p. 10; see also National Skills Task Force, 2000; DfES, 2003, 2005). (The 20% figure has become standard in government statements but is an 'informed judgement' rather than established by empirical analysis.)

In their analysis British policy-makers tread a well-worn path. For example, at much the same time as the DfES was testifying to the Commons Committee, Germany's Chancellor Schroeder was using exactly the same arguments to promote university reform in Germany. What has been highly distinctive, however, is the major policy tool adopted by successive UK governments, the use of qualification targets as a driver of and proxy for skills acquisition.

An overarching framework is provided by the National Education and Training Targets. Originally promoted by the Confederation of British Industry (CBI) and then adopted by successive governments (Wolf, 2002), they set down targets for proportions of young people and adults attaining formal qualifications at different levels. The targets were originally expressed in terms of National Vocational Qualifications (NVQs) at different levels. NVQs were developed by the government during the late 1980s and early 1990s as the launch pad for an intended qualification-based up-skilling of the entire employed workforce (Jessup, 1991; Wolf, 2001). More recent formulations of the targets involve qualifications of all types, and all qualifications offered in publicly supported programmes and institutions other than universities must now be approved and classified within a National Qualifications Framework (see Appendix). This is operated by the Qualifications and Curriculum Agency (QCA), which assigns each qualification a formal level from 1 to 5 (although the QCA is now reclassifying them into eight levels).

Targets drive education policy directly because they are incorporated into Public Services Agreements, which originate with the Treasury and provide accountability measures for public services investment and provision. The DfES thus becomes answerable to the Treasury (and Downing Street) for the 'delivery' of aggregate quantitative targets and in turn disaggregates them and passes specific ones to the agencies it funds. Progress towards them consequently dominates civil service thinking.

The targets of which the general public is most aware are probably those for attainment at Key Stage 2 (age 11) and at GCSE (age 16). However, the education and training of adults, the subject of this paper, has been especially strongly affected. Further education funding has been tied increasingly to the provision of formally accredited courses (which because they are qualification bearing can count towards the targets). In addition, some of the funding in mainstream further education, and a great deal of the funding received by independent 'training providers', who cater particularly for the unemployed and workplace-based training, is 'output related', meaning that payment is directly tied to whether or not learners actually achieve a formal award. This has obvious implications for the type and level of qualification for

which learners are entered by providers who need to 'make' their targets, and also exerts pressure on assessors (Eraut *et al.*, 1996; Mager *et al.*, 2000).

The two adult targets currently receiving most emphasis involve basic skills and 'level 2' awards. (The third major target for the post-compulsory age group, involving 50% participation in higher education, has been downplayed in the last few years, following heavy public criticism. It was very important in the first and early in the second post-1997 Labour administrations.) The basic skills target is for 1,500,000 adults to improve their basic skill levels between 2001 and 2007, with an interim target of 750,000 by 2004. The level 2 target is to reduce the number of adults in the workforce who lack a level 2 qualification by at least 40% by 2010, with 1,000,000 to achieve a level 2 between 2003 and 2006.

The importance attached to these targets reflects the preoccupation with economic objectives discussed above, although, as we will show, it is not necessarily based on any empirical evidence that these targets can contribute to the economic objectives set. Moreover, associated policies increasingly direct subsidies straight to the workplace, to employees and/or employers. Companies now have a statutory obligation to support Union Learning Representatives in the workplace and public funding for the Union Learning Fund supports Union Learning Representative training and promotion of workplace-based learning programmes. Employer Training Pilots were introduced in selected areas by the Treasury in 2003, as a precursor to a national policy, announced in a 2005 White Paper (DfES, 2005). The National Employer Training Programme will direct an increasing proportion of further and adult education funding towards adults in employment and will supposedly be demand led, 'built up from the employers' business needs, and delivered in the workplace' (DfES, 2005, p. 11).

Companies have always spent significant amounts of money on in-house training. However, there is a substantial theoretical literature arguing that 'market failure' is likely, i.e. that the amount of training paid for by employers is likely to be less than is optimal for the economy overall (see, for example, Booth & Snower, 1996; Acemoglu & Pischke, 1999). This is a major justification for the activist role which, as noted earlier, has been adopted by many governments in promoting 'lifelong learning', although there have been and remain major disagreements, in the UK and elsewhere, over the desirability of forcing companies to spend prescribed amounts on training, directly or via levies.

Ensuring progress towards key targets is the major concern of the Learning and Skills Council (LSC), the unitary funding body for further education and training established in 2001. The LSC replaced a structure in which further education and training were dealt with separately (largely through the Further Education Funding Council and the local Training and Enterprise Councils or TECs). Analysts of the new structure agree that it is highly focused on national strategic objectives, at the expense of local flexibility (Ramsden *et al.*, 2004; Coffield *et al.*, 2005). In the immediate future this means a continuing interest in basic skills provision and a major emphasis on 'level 2' qualifications.

The distinctive education policy tools adopted by UK governments partly reflect a general enthusiasm for targets in public sector management. Qualifications are easy

to count and so they are an obvious way of setting and measuring progress towards targets in education and training and once the National Targets had been introduced, the approach became self-perpetuating. But it has also been argued strongly by government policy-makers that qualifications (as compared to uncertificated training) have greater potential to increase economic efficiency because they provide clear signals to employers about holders' skills and potential productivity and so improve the allocation and use of labour (Jessup, 1991; Jenkins & Wolf, 2005). Hence, while the rhetoric around the new National Employer Training Programme emphasizes that it will be 'demand-led' and respond to employers' needs and preferences, in practice the entitlement will reflect government ideas on how to promote productivity: the entitlement is to 'free training to a first full Level 2 *qualification*' (DfES, 2005, p. 18, emphasis added).

Adult learners in Britain: how many and who?

That successive UK governments have shared the goal of increasing economically relevant learning by adults is clear enough. But what evidence is there that the policy has actually achieved its goals?

Information on the numbers and characteristics of British adult learners is highly sensitive to the way questions are posed (Jenkins & Wolf, 2004). However, there are two surveys which have provided repeated measures over a period of years, using consistent question formats. The Labour Force Survey is conducted by all EU member states and collects data on, among other things, qualification levels and participation in training or learning activities in the four week period prior to the survey. In recent years UK data show about one in five adults aged 25–64 reporting participating in training or learning: a figure which is almost identical to the levels reported by Scandinavian countries and much higher than for southern Europe (OECD, 2003).

Participation is more common among the more educated: an international and universal pattern (Bélanger & Valdivielso, 1997). Again, patterns for the UK are very close to those for northern Europe, while in Southern Europe the gap between the more and less educated is substantially greater (OECD, 2003). High participation rates are also reported for employer-provided workplace training. Around one-third of individuals in the UK who have some sort of qualification receive workplace training. This has risen from 30% in 1999. However, among unqualified individuals only one in ten currently receives workplace training in the relevant time period, a figure that is largely unchanged since 1999 (Office for National Statistics, 2005). The other major source of repeated measures is the NIACE surveys of adult participation in learning (with, in this case, the target population comprising anyone aged 17 or over).[1] Over the last 10 years the results show a little over one in five adults reporting participation in learning at the time of questioning and about 40% having participated at some time in the last three years. The NIACE surveys also show stable participation patterns (allowing for the usual year on year fluctuations in a moderately sized survey). The one exception is evidence of a significant decline in participation among those aged 65 or over[2] (see Sargant, 2000; Aldridge & Tuckett, 2004).

A similar pattern of stability is apparent in the Labour Force Survey data on qualifications. Gorard and associates have used these to examine progress towards all the national lifelong learning targets (for the proportion of the workforce holding level 2, 3 or 4 qualifications) and conclude that recorded increases mostly reflect the feed-through of school-leavers who are more formally qualified than their predecessors and that 'there is little suggestion that the qualifications of adults while they are adults has improved much since 1991' (Gorard *et al.*, 1999, p. 86; see also Gorard *et al.*, 2002). The Skills for Life interim target of 750,000 adults improving their basic skills between 2001 and 2004 has been met and might suggest major expansion in this area. However, since adults are, for target purposes, defined as anyone over 16, success was entirely predictable on the basis of pre-existing enrolment and qualification trends. Sixty-eight per cent of those participating in Skills for Life (basic skills) courses are aged 16–18 years, while 75% are under 25 (Meadows & Metcalf, 2005).

Overall we know of no data suggesting that there have been significant increases in adult enrolment, if we define 'adult' as the 25–64 age group of conventional survey usage. The limitation of the sources cited, however, is that they are based on cross-sectional data. Although the Labour Force Survey and the NIACE surveys collect repeated measures, the sample of individuals is not the same. This makes it hard to track detailed participation trends.

However, data do exist with which to address these issues in a UK context, notably longitudinal data from the National Child Development Study (NCDS). The NCDS is a continuing longitudinal survey of people living in Great Britain who were born there between 3 and 9 March 1958. They have been interviewed six times: in childhood and adolescence, and also in 1991 (age 33) and 2000 (age 42). The NCDS database for each cohort member includes attainment on a variety of tests taken at the ages of seven and 11 (including reading and mathematics), school and family background variables (e.g. parents' education, father's social class, indicators of financial difficulties and type of school), initial and later education and training, employment status and wages. Among the information collected at the most recent interview (at age 42) were formal qualifications[3] taken since the age of 33 (when previously interviewed) and current enrolment on qualification-bearing courses.[4]

These data offer us a much clearer picture of how far recent government policies have succeeded in shifting participation patterns and also whether the qualifications adults obtain have any discernible effects on their working lives. We have, specifically, useable data for 9829 cohort members, although missing data on some variables means that the actual sample size varies between analyses.

Seventy per cent of the NCDS cohort reported undertaking some form of training or course during the period 1991–2000 (and many reported more than one form). One-third acquired a qualification of some description (33% of the sample, 30% of males and 36% of females). In addition, 31% reported undertaking non-certificated training at work at some point during 1991–2000 and 24% undertook some form of non-certificated 'leisure' learning. Respondents were also asked about current learning activity. Ten per cent reported that they were currently involved in a course leading to a qualification, with women again more heavily represented.

Between 1981 and 1991 34% reported taking a qualification-bearing or access course, so there appears to be no overall drop-off in cohort members' involvement with certificated learning. (In contrast, the NIACE surveys regularly report significant declines in the incidence of learning between those in their 20s and their 30s. This may reflect differences in sample size and composition:[5] the NIACE results on age-related participation do not differentiate between certificated and uncertificated learning.)

Table 1 shows what type of qualifications respondents reported they had obtained. ('Vocationally related' qualifications are qualifications such as BTEC Diplomas or general NVQs. What are conventionally thought of as vocational awards are classified as occupational in the National Framework.) Readers should note that this shows total number of qualifications obtained by the sample and that many respondents obtained more than one. As noted earlier, 33% of the total sample obtained one or more formal qualifications between 1991 and 2000 (18.5% obtained just one, 7.5% obtained two and 7% obtained more than two).[6]

As Table 1 makes evident, qualification-oriented lifelong learning led predominantly to occupational qualifications, rather than academic or vocationally related qualifications. Government policy has focused on occupational qualifications, and adult certification thus follows the desired pattern. Notably, 16% of the sample obtained occupational qualifications at level 1 of the framework. These include NVQ level 1, lower level RSA qualifications and other low level qualifications, such as Pitmans level 1 and HGV licences. Some 7% of the sample obtained occupational qualifications at level 2 (the subject of one of the current high priority targets), which

Table 1. NCDS cohort members obtaining qualifications between ages 33 and 42 by National Qualifications Framework levels and type

	Number	Per cent
Academic Level 1	23	0.23%
Academic Level 2	214	2.18%
Academic Level 3	108	1.10%
Academic Level 4	360	3.66%
Academic Level 5	130	1.32%
Vocationally related Level 1	16	0.16%
Vocationally related Level 2	156	1.59%
Vocationally related Level 3	104	1.06%
Vocationally related Level 4	98	1.00%
Occupational Level 1	1541	15.68%
Occupational Level 2	702	7.14%
Occupational Level 3	276	2.81%
Occupational Level 4	402	4.09%
Occupational Level 5	273	2.78%
Total sample[a]	9829	100%

[a]Note that individuals may acquire more than one qualification during this period.

include City and Guilds part 1 and NVQ level 2 qualifications. Relatively small numbers took academic qualifications between the ages of 33 and 42, the exception being the 360 (approximately 4%) who obtained level 4, namely degrees or higher education diplomas.

But are these learners the individuals whom the government wishes to target? And is policy succeeding in increasing uptake by the less skilled? As noted above, adult learning in the UK, in common with the rest of the developed world, is much more common for those from higher social classes and with higher levels of formal education. For example, data from the NIACE survey indicate that in 2004, 54% of people in classes A and B, but only 25% in classes D and E reported some learning (Aldridge & Tuckett, 2004; see also Beinart & Smith, 1998, for a multivariate analysis using data from the National Adult Learning Survey). The NCDS sample is no different. For example, only 20% of those who left school without any formal qualifications report that they obtained one in the previous decade, while 35% of those who acquired A-levels also acquired further qualifications.

Since the 1990s were a period of constant government activity in this area, we used multivariate analysis to investigate the predictors of participation at either end of the decade. This allows us to look at the effects of different variables while controlling for the fact that they tend to be highly intercorrelated. (This is notably the case for education, occupation, income and class of origin.) We specified a standard probit model (see Jenkins *et al.*, 2002) incorporating variables which previous research indicated were important in explaining participation levels. Table 2 (for men) and Table 3 (for women) show which variables had a significant impact, first, on the likelihood of undertaking qualification-bearing courses between 1991 and 2000 and, second, on

Table 2. Determinants of the decision to undertake qualification-bearing courses: males ($n = 3878$)

	Undertaking or completing a course 1991–2000	Enrolment on a qualification-bearing course 2000
Obtained a qualification 1991–2000	N/A	Significant at 1% level
Ability at age 11[a]	Significant at 5% level	Not significant
Unemployed in 1991	Significant at 1% level	Not significant
Union membership	Significant at 1% level	Significant at 5% level
Work for public sector	Significant at 5% level	Significant at 1% level
School qualifications (base case none)		
CSEs	Significant at 5% level	Not significant
<5 O-levels	Significant at 5% level	Not significant
>5 O-levels	Significant at 5% level	Not significant
A-level	(Significant at 10% level)	Not significant
Post-school qualifications		
Mid-level vocational	Significant at 1% level	Not significant

For a full specification of this model, including non-significant variables included, see Jenkins *et al.* (2002).

[a]The ability measure is an index derived from reading, mathematics and general ability tests taken at age 11.

the likelihood of being on one in 2000. (Separate analyses are needed because the labour market participation patterns of males and females are radically different.) These indicate whether, using the same individuals and with constant measures and definitions, there were changes by the end of the 1990s, as government policy intended.

Table 2 summarizes the variables which are significantly associated with the probability of males having completed, or being engaged in, qualification-bearing learning. For the period up to 2000 we find, as in other studies, that school performance is quite strongly related to the likelihood of obtaining a qualification: for example, as compared with those who left school with no qualifications, both men who left with CSEs and those with five or more O-levels are 9% more likely to obtain qualifications. (Post-school qualifications generally show no effects.) Being unemployed in 1990 is associated, for male respondents, with a 17% greater chance of taking a qualification-bearing course in the next nine years (compared with the employed). Union members are 6% more likely than non-members to have achieved a qualification and private sector employees 4% less so. In contrast, family background and firm size did not have a significant independent effect on the likelihood of obtaining a qualification.[7]

When we look at the factors associated with participation in 2000 (reported by 8% of men in the sample) we find that, in contrast, prior qualifications do not impact on the likelihood of participating in a course. This does not mean education has become irrelevant. Its effect is captured by what is now, for men, the single most important predictor of participation, namely having obtained a qualification during 1991–2000. While some unqualified men were obtaining qualifications in their 30s, it is also the case that the most educated men were far more likely to participate in adult learning during those years and that those who acquired more qualifications then were in turn 11% more likely to be enrolled at the age of 42. Nonetheless, the fact that education level appears to have no additional impact on enrolment in 2000 provides some weak support for the idea that participation shifted somewhat in the desired direction, away from the most educated men, though not to the point where less favourable backgrounds are positively associated with learning.

For women, as Table 3 indicates, the pattern is more complex. For acquisition of qualifications between 1991 and 2000, the impact of both the ability variable and the initial education variables is much greater for women. In most instances the marginal effects are double. Thus, whilst having five or more O-levels increases the probability of acquiring more qualifications by around 9% for men, the impact for women is nearer 19%. Post-school qualifications and family background factors are also significant to a greater degree than for men. Overall, it would seem that succeeding first time around (having better skills, getting more qualifications) is powerfully associated with acquiring qualifications in later life in the case of women.

Women were more likely to be enrolled on qualification-bearing courses in 2000 than were men: 12% rather than 8% reported involvement. As for men, the most powerful predictor of enrolment in 2000 was having previously acquired qualifications, something which is itself again strongly related to prior education level. Those who had acquired one or more between 1991 and 2000 were 11% more likely to be

Table 3. The determinants of the decision to undertake qualification-bearing courses: females (n = 4213)

	Undertaking or completing a course 1991–2000	Enrolment on a qualification-bearing course 2000
Obtained a qualification 1991–2000	N/A	Significant at 1% level
Out of labour force 1991	Negatively related: 5% level	Negatively related 10% level
Ability at age 11[a]	Significant at 1% level	Not significant
Union membership	Significant at 1% level	Significant at 10% level
Worked in public sector	Not significant	Not significant
School qualifications (base case none):		
CSEs	Significant at 5% level	Significant at 1% level
<5 O-levels	Significant at 1% level	Significant at 1% level
>5 O-levels	Significant at 1% level	Significant at 1% level
A-levels	Significant at 1% level	Significant at 1% level
Post-school qualifications		
Mid-level vocational	Significant at 1% level	Not significant

For a full specification of this model, including non-significant variables included, see Jenkins *et al.* (2002).

doing so again at the time of interview in 2000. Moreover, in contrast to men, higher levels of school attainment remained independently significant in predicting who was more likely to participate at this point (although the marginal effects were considerably reduced). Overall, participation patterns for women give little indication of any significant move in the direction intended by government policy.

Motivations for undertaking lifelong learning

As we have seen, the most common form of lifelong learning leading to a qualification is a relatively low level occupational award (see Table 1), which is presumably intended to improve specific occupational skills rather than provide a general 'second chance' educational ladder. This is certainly consistent with recent UK governments' desire to steer learning in directions which will (supposedly) increase workplace productivity. In the next section we discuss whether there is any evidence of such productivity increases actually occurring, but first we examine whether adult learners themselves see their activities in economic terms. The motivation data discussed here relate specifically to award-bearing courses. As one might expect, when asked about motivation with respect to any sort of formal learning or course that had been undertaken, respondents place relatively less emphasis on work-related outcomes (Aldridge & Tuckett, 2002).

When the NCDS respondents were interviewed in 2000, rather little information was, unfortunately, collected about their motives for taking courses. Only if they were actually on a course at the time of interview was their reason for enrolling collected: in this case they were shown a card with possible prespecified outcomes from their

Table 4. Perceived probable results of current courses leading to qualification: percentage selecting each (NCDS respondents, 2000; $n = 1029$)

	n	%
Get a new job	225	21.9
Change to a different type of work	190	18.5
Learn new skills for current job	397	38.6
Able to do job better	377	36.6
Get a pay rise in current job	118	11.5
Get promotion in current organization	133	12.9
Get more job satisfaction	301	29.3
Other job-related outcomes	193	18.8
None of these things	176	17.1
Total sample	1029	

course and asked which they thought might actually happen (up to a maximum of eight). Table 4 gives responses for the 1029 respondents (the pattern for which is similar for men and women). They are, as can be seen, overwhelmingly job related, although this no doubt reflects, in good part, the nature of the options offered.

Only 20% of respondents claimed that they were on a course for reasons which had nothing to do with work. Almost twice as many saw this type of learning as an opportunity to do a job better or to learn new skills. Significant numbers wanted to facilitate a change in their employment, either to a new job or to a different type of work. However, only around one in ten workers expected their current course to lead to a pay rise in their current job, compared with more than a quarter who expected to get more job satisfaction as a result.

In 1991 (NCDS sweep 5) all respondents had been asked in some detail not only about courses taken in the previous decade (i.e. 1981–1991, between the ages of 23 and 33) but also about their motivation for taking these. Motives for undertaking courses leading to qualifications (as opposed to leisure courses) and access courses were recorded for the two most recent courses taken, with qualification courses taking priority over access courses if the respondent had done both. For each up to three reasons could be specified.

The question was phrased as follows: 'Did you start this course mainly because you needed it for the job you were doing or taking up at the time; because you thought it would lead to a better job later; or mainly for another reason?'. The other reasons were recorded verbatim and coded later. Given this phrasing, a predominance of job-related reasons would probably be expected. However, it is noteworthy that many of the verbatim responses also turned out to be work related.[8] In all, 3830 (33.6%) of the sample reported taking qualification-based or access courses during 1981–1991; 3157 or 82% of these learners gave a work-related reason.

These responses suggest substantial agreement between learners and policy-makers regarding the purpose of certificated adult learning. The form of response may also, however, make adult learners' motivation seem less complex and sophisticated than

is really the case. The sensitivity of findings to wording and analysis is highlighted by some more recent data collected in 2004–2005 as part of an ongoing study of employed adults undertaking government supported, qualification-bearing workplace learning (for a full description of this study see Evans & Wolf, 2005a). The sample of 295 is much smaller than the 1000-odd NCDS respondents enrolled on courses in 2000, but unlike them is made up entirely of individuals from the government's priority target group, namely employed adults with few formal qualifications. All were following workplace-based courses in which there was at least some formal 'basic skills' content and all were volunteers. They were asked why they were taking the course and offered four pre-specified possible reasons and the opportunity to volunteer other reasons. As Table 5 shows, work-related reasons, while important, are by no means dominant.

Funding for workplace basic skills instruction is promoted by the government as a way to reduce presumed substantial losses to employers resulting from basic skill deficiencies among workers. A figure often cited is that poor basic skills cost firms around £10,000,000,000 in 1999. [See, for example, the Moser report, which led to the major 'Skills for Life' initiative to improve adult basic skills (DfEE, 1999). See also Ananiadou *et al.* (2003) for a critique of the research base for this figure.]

However, employers involved in the study of workplace programmes which we have just cited appear to be far from convinced either that their workers are suffering from some major skill deficit which reduces their productivity or that the training they receive will have immediate pay-offs for the enterprise. Like their employees, they appear to have a far more nuanced view of the links between training, pay and productivity than do Whitehall policy-makers.

The managers responsible for organizing the programmes were offered a list of 10 predefined possible benefits to the company from the course and asked, first, which were of any relevance to the company and, second, which was seen as the single most important.[9] Of the 20 interviewed to date only two identified acquisition of job-related skills as critical. Overall, managers identified an average of seven options as relevant, but only half included acquisition of job-specific skills in their list. The two managers who identified job-related skills as very important both ran care homes (and were the only ones to do so). Here, new regulations have created demands for higher

Table 5. Reasons for undertaking training: adults in government-supported workplace programmes 2004–2005 (n = 295)

Reason for undertaking course	One reason for undertaking course (%)	Most important reason for undertaking course (%)
Increase skills for current job	32.5	14.2
Prepare for future job	21.4	8.5
Develop skills in general	53.6	32.9
Increase skills of use at home (e.g. to help children)	15.6	4.7
Other (open-ended)	24.7	

literacy levels among workers as well as requiring employees to acquire formal qualifications (NVQs) as a condition of the home remaining open.[10]

The economic impact of lifelong learning

To policy-makers the direct link between 'lifelong learning', skills enhancement and prosperity appears self-evident. Given this general assumption, what is surprising is not that many adult learners agree, but that, as we have seen, many have no great expectations of wage or career gains. However, as Coffield pointed out in his summary of findings from the ESRC's large Learning Society Programme (Coffield, 2000, p. 8) there is actually no hard evidence at all to support these firmly held beliefs about the impact of education for adults.

In the case of initial (including initial post-compulsory) education for the young, there is clear evidence that more education benefits the learner. Those with more initial education (e.g. upper secondary certificates, university degrees) have higher earnings and lower unemployment rates. While it may be difficult to tell how much this is a reward for the higher skills acquired through education and how much a result of educated people's actual or presumed higher ability and attractiveness to employers, the financial 'returns' to such education are very clear (OECD, 2004a; Dearden *et al.*, 2005; Machin & Vignoles, 2005).

There is also a moderate amount of good quantitative data on the impact of employer-provided and uncertificated workplace training (largely French, American and Dutch). This is summarized in Ananiadou *et al.* (2004, p. 299), who concluded that, 'In general—though not universally—the literature finds strong evidence of wage effects of training for individuals'. Overall:

> A great deal of the training currently provided by employers has a major direct impact on recipients' wages. … It seems reasonable to conclude that these wage gains reflect, at least in part, substantive changes in the productivity and value of the employee to the employer. (Ananiadou *et al.*, 2004, p. 303; see also Barrett & Hovels, 1998)

No such wealth of evidence is available for publicly supported 'lifelong learning', whether in the form of adult education or supported workplace training. With the exception of degrees (to which we return below), little is known nationally or internationally about the economic impact of qualifications gained in adulthood.

The NCDS data set is therefore unusual and valuable in allowing us to examine some of the concrete effects of 'lifelong learning' and, specifically, of acquiring qualifications. If the government is correct, then newly qualified learners will become more productive (by acquiring new skills and also because the qualification 'signal' helps employers put the right people in the right jobs). As a result, they should also be paid more.

As we have seen, the assumption that education and training make people more productive, and so help increase overall wealth, lies at the centre of modern governments' education policy. However, there are likely to be wide variations in the extent to which any productivity increases translate directly into higher wages for the newly

skilled or newly qualified (Wolf, 2004). In some cases, notably where employees find it very hard to move to a new job, the benefits may all be captured by the employer. Often, they may be shared, with the employee receiving some increase in remuneration and the employer also receiving benefits, and higher profits.

The less free the labour market, the less one can expect a one-to-one relationship between greater productivity and higher pay. This affects public sector services generally, since pay scales are normally established centrally. More generally, countries differ in the degree to which they insist on a licence to practise various occupations and tie this to officially recognized qualifications or diplomas. Such licensing arrangements are almost universal in the case of doctors, nurses and lawyers, but there are enormous differences between, say, the UK and Germany in the number of regulated occupations which can only be practised by the formally qualified. There are also large differences (e.g. between France and the UK) in whether or not central wage bargaining agreements guarantee wage rises on receipt of additional diplomas.

The more occupations that are licensed, the more likely it is that some diplomas will lead directly to pay benefits (since a formally closed occupation is now open to the diploma-holder). How far such licensing protects the public and ensures high standards and how far it reflects the successful creation of monopolies and costly barriers to entry is an empirical question, with the balance varying from occupation to occupation. Clearly, however, it further affects one's ability to interpret pay changes as reflections of individual productivity. Nonetheless, pay is, in practice, the only useable measure of productivity available to us. In the current UK labour market we consider that it is likely to bear some, albeit an imperfect, relationship to underlying skills and skill changes. Our governments certainly believe that it is a valid measure and consistently interpret higher graduate wages as clear evidence of the economic benefits of higher education (Wolf, 2002).

We therefore examined the impact on earnings in 2000 of formal qualifications obtained by the NCDS sample between 1991 and 2000. The effect was estimated controlling for: early attainment on academic tests;[11] school qualifications; highest post-school qualifications obtained before 1991; type of school attended; parental education; family circumstances, including parental interest; job characteristics (union membership, firm size, sector). (See Jenkins *et al.*, 2004, for the full specification of this model, including all marginal effects.) Each of these variables has been found to be an important determinant of earnings in one or more previous studies (see, for example, Choudhury, 1994; Rees & Shah, 1995; Green *et al.*, 1996; Hildreth, 1999). For example, since public sector wages are on average lower, we need to allow for sector in our model. Only then can we be sure that we are identifying the wage effects of lifelong learning, as opposed to the (negative) wage effects of being in the public sector.

Table 6 summarizes the main results. They are clear and indeed stark. By and large, there are no widespread wage effects from qualification-bearing learning. Certain sub-groups may benefit. In particular, females who acquired degree level qualifications (general level 4) earned on average 8% more and females and males who gained higher degree (level 5) awards earned 22% and 15% more, respectively, than those who acquired no formal qualifications between ages 33 and 42. For males

Table 6. Impact on wages in 2000 of formal qualifications gained since 1991

Qualification acquired	Males[a] (n = 2819)	Females[a] (n = 2960)
Academic level 1	Negative effect (5% level)	No significant effects
Academic level 2	No significant effects	No significant effects
Academic level 3	No significant effects	No significant effects
Academic level 4	No significant effects	Positive effect (1% level)
Academic level 5	Positive effect (5% level)	Positive effect (1% level)
Occupational level 1	No significant effects	No significant effects
Occupational level 2	Negative effect (1% level)	Negative effect (5% level)
Occupational level 3	No significant effects	Positive effect (5% level)
Occupational level 4	No significant effects	Positive effect (1% level)
Occupational level 5	No significant effects	No significant effects
Vocationally related level 1	No significant effects	No significant effects
Vocationally related level 2	No significant effects	No significant effects
Vocationally related level 3	No significant effects	No significant effects
Vocationally related level 4	No significant effects	No significant effects
Vocationally related level 5	No significant effects	No significant effects

[a]Base case no qualifications gained.
Estimates control for ability and prior educational attainments, for family background and for job characteristics. Results are for OLS regression of log hourly wages in 2000 on explanatory variables (see Jenkins *et al.*, 2004, for full details of the specification).

these high level academic awards are the only ones with significant positive earnings effects. However, women also benefit from level 3 and 4 occupational awards (with average 8% and 9% wage premiums).

There is no evidence at all for earnings gains from the relatively low level qualifications (levels 1 and 2) favoured by current policy. Instead, the data show a significant negative impact on wages associated with acquiring an occupational level 2 certificate (e.g. an NVQ2). For men it is associated with wages that are 10% lower and for women with wages 7% lower than the base case (of no new qualifications post-1991). The lowest level of academic qualification is also associated with lower earnings for men, but so few people took these in their 30s (12 people in the whole sample) that this result must be treated with caution. In contrast, 353 people took level 2 occupational qualifications (and 807 took them at level 1).

One possibility which might explain the apparent lack of impact of qualifications on earnings is that many of the people who acquired low level qualifications already had higher ones. For example, some might be managerial or supervisory workers who acquired low level NVQs as a way of demonstrating up-to-date acquaintance with specific vocational skills or for regulatory reasons. We therefore analysed the impact of qualifications looking only at those respondents who had actually increased their highest level of qualification between 1991 and 2000.

Five per cent of the sample had raised their academic qualification level, 15% their occupational qualification level and 11% had acquired a qualification whose

level was higher than their highest one (of any sort) had been in 1991. This compares with 34% who acquired some form of new qualification. Of those with no qualifications in 1991, 17% had acquired one by 2000, mostly at level 1 or 2, while 15% of those whose highest level was level 1 in 1991 had improved on this, and so had 12% of those who were at level 2 in 1991. In comparison, 11% with a level 3 in 1991 had acquired a level 4 or 5 qualification and 8% of those with level 4 acquired a level 5.

We examined whether increasing one's highest level of qualification between 1991 and 2000 earned a wage premium. Because numbers were fairly small we had to merge qualification levels and simply look at whether any increase in level affected wages, using the same full set of control variables as before. We were not able, for example, to compare the effects of raising the highest level from level 1 to level 2 with those of moving from level 3 to level 4.

As so often (Dearden *et al.*, 2005), the effects appear substantially different for men and women. For men, it made no difference whether the qualification obtained from 1991 onwards was at a higher level than the qualifications obtained earlier in life or not: either way there was no significant effect on wages. However, for women, increasing the highest qualification held in the course of the 1990s did have a significantly positive effect on wages, raising them on average five percentage points, while obtaining a qualification without increasing the highest level did not influence wages.[12]

The NCDS data also indicate that acquiring a qualification may be associated with movement from outside the labour force (or being unemployed) into employment.[13] Those out of work at the beginning of the period were more likely to be in work at the end of the period if they had undertaken qualification-bearing courses meanwhile. The causal chain here is not clear or simple: among the group that both obtained a qualification and moved into the labour market between 1991 and 2000, roughly one-third undertook their learning before (re)entry, one-third at the time of entry and one-third after (re)entering employment. However, further analysis using duration models showed that qualifications did have a positive impact on the probability of women making the transition into employment (Jenkins, 2004).

We have already noted the absence of hard evidence on whether 'lifelong learning', and specifically lower level vocational awards, is of general benefit to learners. There have, however, been some studies of degree acquisition which are broadly consistent with our findings and show earning gains, although not always very large ones. Steel and Sausman (1997) compared mature graduates and those who graduated at the 'usual' age of 21. They concluded that rates of return for more mature graduates were lower than, but quite close to, those obtained by early graduates.[14] Blundell *et al.* (1997) concluded that for the NCDS cohort, men who began their course at over 21 but completed it by age 33 earned a return about seven percentage points lower, while starting after age 21 did not appear to have any detrimental effect on women's earnings at 33. Egerton (2000) used data from the General Household Surveys (GHS) for the years 1983–1992 and defined a mature graduate as one who had obtained a first degree after the age of 25 or who completed a higher degree after the age of 28. She

found that mature male graduates earned substantially less than early graduates.[15] Egerton and Parry (2001) also utilised the GHS for the years 1983–1992 to obtain estimates of rates of return for both male and female mature graduates. Mature male graduates had a rate of return of just 1.5% over those with A-levels, while for mature women the figure was 5.6%. In contrast, male early graduates earned rates of return of between 6% and 10% and female early graduates earned returns of between 22% and 27%.

Our results are thus consistent with other research insofar as it exists. They also call into question the basic assumption of current government policy, for they indicate that few types of qualification appear to have any significant impact on earnings. This conclusion is strengthened if one takes into account that individuals who undertake this form of learning may not be randomly selected from the population as a whole. Instead, such lifelong learners may be more able and motivated, factors that are likely to have an independent positive impact on their earnings. The results also need to be set alongside a large body of research that found relatively short spells of unaccredited employer training were often associated with substantial wage gains: a finding which also holds true for the same NCDS cohort which failed to benefit financially from accredited learning (Vignoles *et al.*, 2004).

Discussion and conclusions

Commentators on the education policy of both the Labour government since 1997 and its Conservative predecessors agree that it has been overwhelmingly preoccupied with human capital formation. This restricted set of objectives is also often criticized for ignoring and indeed undermining other key functions of a national education system (see, for example, Coffield, 2002a, b; Wolf, 2002; Lloyd & Payne, 2003a). The findings discussed here suggest strongly that, even on their own terms, current policies are not successful.

Large numbers of adults are obtaining formal qualifications, most of them work oriented in nature. Moreover, while the individuals who undertake this type of life-long learning are likely to be more educated and skilled, there is also some 'upskilling' of the type prioritized by government policy. A good number of low skilled individuals are achieving new qualifications at higher levels than before. Yet, when we examine the effect of such qualifications on earnings, very little positive impact can be found.

Before discussing these findings with reference to other commentaries and critiques of current policy, it is important to ask whether our findings reflect peculiarly British circumstances or a more general phenomenon. Unfortunately, very little empirical evidence is available for other countries. We know that, as in the UK, adult learners in other developed countries tend to give work-related reasons for undertaking courses (van der Kamp, 1997). We also know that throughout the world short-term training courses for the unemployed have poor outcomes in terms of employment and earnings (see, for example, Heckman, 1999; Grubb & Lazerson, 2004). However, our interest here is in the impact of formal qualifications on the earnings of the adult population as a whole, and particularly those of the low skilled (but predominantly

employed) labour force. It would have been particularly interesting to compare UK findings with those of a more regulated labour market, with more formal provision for rewarding additional qualifications.[16] Unfortunately, however, very few countries have longitudinal data from which to evaluate the effects of mainstream adult ('lifelong') learning.

The two countries for which there are relevant comparative data are the USA and Sweden. In the USA a longitudinal survey of adult women found very clear positive wage effects for on-the-job training, in line with many other studies, but no clear positive pay-offs to formal education after the age of 30 (Hill, 2001). The bulk of relevant US evidence, however, relates to the General Educational Development (GED) certificate, which can be gained by high school dropouts and adult immigrants and is formally equivalent to a high school diploma. At present almost 500,000 adults a year obtain the GED.

Labour market data clearly show that the GED certificate does have value and that certificate holders earn more than those without a high school diploma, but also that its worth is significantly less than a 'normal' high school diploma. This difference is best explained not in terms of the cognitive skills or academic attainment associated with the two diplomas, but by employers using the diplomas as signals not merely of skills but also of attitudes and likely work ethic (see especially Cameron & Heckman, 1993; Murnane *et al.*, 1999). The GED evidence confirms that adults who obtain certificates may indeed be viewed as more valuable (and productive) than those who do not. However, it is also important to emphasize that the diploma is generally acquired by young adults (under 30), that it is not a vocational certificate and that it is a single qualification with a long history and very high recognition levels across the country.

Swedish data are more immediately relevant to the UK case because of similarities in government policies between the two countries. The component of Swedish adult education which is most remarked upon and admired abroad is 'popular', unaccredited learning, run in myriad study circles affiliated to study associations and in the 'folk high schools'. But, as Rubenson (1997, p. 72) pointed out, from 1967 onwards increased public funding for the sector was, as a matter of official policy, aimed mainly at developing 'forms of adult education that would effectively contribute to the advancement of the Swedish economy'.[17] Four out of five participants in adult education in the mid-1990s were receiving some form of employer support or sponsorship, which is in turn underpinned by legislation, collective agreements and training allowances from the National Labour-market Board. Rubenson concluded that 'the increase in the total participation rate since the early 1980s is almost exclusively due to more and more people reporting employer-sponsored activities. … [This] has radically altered the Swedish landscape of adult education' (Rubenson, 1997, p. 78).

Longitudinal analysis of the impact of participation in Swedish adult sub-degree education indicates rather few economic benefits for participants (Ekström, 2003). The adult programmes studied are equivalent (although not identical) to regular upper secondary education and designed as a 'second chance' for adults, and attract around 150,000 participants a year in a population of 9,000,000. For Swedish-born

adults participating between 1988 and 1995[18] Ekström found that earnings in 2000 were significantly lower for participating men, on average by 3.5% (at the 1% significance level), compared with non-participants matched with respect to age, prior educational level, marital status, residence, entry date and pre-programme earnings. For Swedish-born women and male immigrants there were no significant programme effects either way. Only for female immigrants was there a positive effect (at the 10% significance level), giving an earnings increase of 9%.

Overall, therefore, the international evidence for 'mainstream' educational qualifications obtained in adult life indicates economic gains for some groups, at a considerably lower level than for young learners, and none at all for others. There is also nothing to suggest that the UK data reflect unique characteristics of the country's labour market, although there are likely to be major differences between it and countries where large numbers of occupations require formal licences to practice.

British, and especially English, governments' enthusiasm for qualification targets meanwhile shows no sign of abating, with 'leisure' and other non-award-bearing courses increasingly squeezed to make room for certificated learning. Can we explain the apparent failure of adult learners to reap any financial rewards for their new certificates and what does it imply for the impact of the next wave of initiatives?

There are several possible and not mutually exclusive explanations for our findings, all of which receive some support from other research evidence and recent commentary. The first is that a substantial proportion of these qualifications are acquired for non-wage- and non-productivity-related reasons. The second is that gaining a qualification may not mean that the holder has actually acquired new skills. The third is that many of the skills being taught and/or certified do not command any wage premium because of a lack of demand for them among employers.

As we have seen, most qualification-bearing learning does appear to be work oriented and taken for job-related reasons. However, one in five NCDS respondents and more than two in five adults on workplace basic skills courses cite non-job factors as the reason for acquiring a qualification in adulthood. If lifelong learning results in skills or knowledge unrelated to individuals' jobs, one would not necessarily expect this to lead to higher productivity or wages for these workers.

The survey evidence may also, as discussed above, overstate the importance of work-related reasons. Furthermore, even when job related, the learning may still not be undertaken with a view to increasing a person's productivity or wages. Our work has suggested that workers in the public sector who are union members and who work in large firms are more likely to obtain occupational qualifications. Their workplaces are also, on average, more subject to regulation relating to concerns over health and safety, quality assurance and public accountability (while wages are set more by collective agreement than by managers' responses to individual productivity).

We may therefore hypothesise that, in at least some cases, individuals and establishments invest in qualifications because of institutional demands to do so, rather than to increase earnings or productivity. Some interesting research by Cooke *et al.* (2000) sheds some light on this. It was carried out as part of the ESRC's Learning Society Programme (1994–2000), which is the major single source of in-depth

research on adult learning in the contemporary UK.[19] A number of projects, including Cooke's, examined workplace-based and employer-sponsored learning in sectors where there had either been a major increase in the amount of training or where training had been significantly affected by government policy and initiatives.

Cooke and colleagues focused on three sectors (care, construction and engineering) in which there has been heavy promotion and/or uptake of NVQs in recent years. The care sector has probably been the sector of the labour market in which NVQs have had their greatest effect, both proportionately and in terms of overall numbers affected. This is a sector where there has been very rapid growth in employment and where there was little or no tradition of qualifications for lower skilled workers. Now NVQs are used by government as a way of monitoring quality. Employers must ensure their staff obtain them in order to secure certification and that they continue in operation.

Cooke and co-workers reported in their discussion of care workers, 'In this sector … NVQs … were not held in high esteem' (Cooke *et al.*, 2000, p. 215). To the extent that such qualifications are used as a way of demonstrating compliance for audit purposes and attest to existing skills rather than developing new ones, they are unlikely to produce significant income effects.[20] This is consistent with our argument that some qualifications, especially occupational ones, may be acquired for reasons other than to improve skills and productivity.

The second, and complementary, explanation as to why there is little wage gain from this type of certified lifelong learning is that the qualifications which adults acquire do not necessarily increase their substantive skills at all.

The National Health Service is a major example of a sector in which training expanded greatly in the 1990s, and research, also for the Learning Society Programme, by Hewison *et al.* (2000) (see also Dowswell *et al.*, 1998) indicated how many of those involved felt they were effectively forced into training rather than opting in, and how rarely they described or experienced the training as involving substantive increases in their skills. Stanton (1996) also documented the harmful effects on quality of the output-related funding regime adopted in the 1990s for government funded training programmes offering lower level vocational qualifications. As noted earlier, a large part of training providers' funding was made available only when and if a trainee acquired formal certification, the said certification also being, for the most part, under the control of the training establishment. Eraut *et al.* (1996) studied NVQs specifically and found major problems with the quality and reliability of the assessment and that the system often failed to encourage systematic skill acquisition by those working for the awards.

In other cases qualifications may indeed signal skills acquisition, but not at levels any higher than, and possibly lower than, equivalent uncertified workers. (So one would not expect the certified to obtain higher wages, other things being equal.) Again, this is illustrated by the research by Cooke *et al.* (2000). They reported a general belief that the construction standards associated with NVQs represent a decline as compared with the past (Cooke *et al.*, 2000, pp. 213–214), while in engineering, those employers (somewhat over half) who had adopted NVQs 'admitted that the qualifications parallel the training they would have been doing anyway'

(Cooke *et al.*, 2000, p. 213). If the major difference between certificated and non-certificated workers is not their skill levels or the amount of training they have received, but simply whether their employers have decided, or been persuaded, to introduce a system of formal awards then, at least in the short term, significant wage gains associated with certification are unlikely.

The third possible explanation for the finding of minimal returns to certified life-long learning is that the skills being acquired are not in demand. In other words, adults are acquiring new skills, signalled by formal certification, but are unable to obtain higher wages because the labour market does not make use of these. There is consequently no increase in economic productivity which can be passed through (in part) to the worker.

This third scenario lies at the heart of current policy debate over UK skills policy, notably as conducted in this journal (see especially Keep, 1997; Coffield, 2002b, 2004; Lloyd & Payne, 2003a, b). Successive governments' emphasis on human capital formation as the core of education policy, in the UK and elsewhere, has been based on the assumption that skill levels are a critical determinant of productivity and growth levels. It has also until recently assumed, at least implicitly, that intervention on the supply side, to increase skill levels, will feed through into the economy more or less automatically.

Both these assumptions are questionable. Skills are only one consideration among many in firms' (or public sector organizations') strategy making, and a third or fourth order one at that (Keep, 1999). In the UK in those sectors which have shown the greatest growth and improvement in recent years, shortfalls in training and skill development seem to have been insignificant factors in explaining either decline or revival (Owen, 1999). In many parts of the economy there appears to be no obvious 'skill shortage', even at the craft and technician levels most often identified as problematic (Wolf, 2004). The large-scale study of *Work skills in Britain* (Felstead *et al.*, 2002), commissioned by the DfES, indicated that if skills shortages were evaluated in terms of broad categories of skill levels required (levels 1–4, in line with the National Qualifications Framework), the only category for which there were more job openings than people qualified at the relevant level was that of 'no formal qualifications required'.

Of course, this finding is quite consistent with the existence of serious and persistent shortages of specific skills (in, for example, construction or mathematics teaching). It is also entirely compatible with the existence of a 'low-skill equilibrium' (Finegold & Soskice, 1988) in which many firms are able to remain profitable using low skill, low value-added strategies and have no motivation to make the difficult move to a high value-added strategy which would, among many other things, require them to utilize higher skilled workers (see, for example, Skills Task Force, 2000).

This point has been made repeatedly by researchers, arguing that governments' emphasis on the supply of qualifications and skills must lead to disappointment in the absence of a demand for skills from employers. At one level it might seem that this argument has been won. The Performance and Innovation Unit in the Cabinet Office carried out a major review of workforce development issues in 2001, with an academic panel which included some of the foremost academic commentators in this

area and duly published a report entitled *In demand: adult skills in the 21st century* (Performance and Innovation Unit, 2001).

The report's emphasis on the importance of fostering demand for skills among employers is echoed in the recent White Paper on skills (DfES, 2005), whose proposals, notably the new National Employer Training Programme, will supposedly increase the extent to which skill formation responds to employer demands and current needs in a direct, firm-specific way. The shift in policy emphasis to the demand side is also reflected in the remit given to the Sector Skills Councils (which have replaced National Training Organizations) and to the overarching Sector Skills Development Agency. However, at this stage it is still unclear how these initiatives might motivate or help companies move to higher skill, higher value-added strategies.

Coffield (2004) has pointed out that it is the supply side (colleges and other providers) that is actually being subjected to increasing regulation and control, while employer activity remains entirely voluntary. But it is also true that employers are not in fact able to request public support for the skills or training that they see as relevant to up-skilling or strategic change. They must operate within the confines of funding tied to particular approved national qualifications. Under current schemes (Employer Training Pilots, ESF, Skills for Life, etc.) the dominant experience of all but the largest employers is not of initiating government funded training. It is of being approached by 'cold-call' providers who offer to deliver and assess training, free, with minimal involvement by the employer or of working with unions to provide a personal development initiative rather than a commercial one (Evans & Wolf, 2005b). There seems to be no reason why the new programmes should be any different. On the contrary, a continuing mismatch between skill provision and employer demand seems likely, with a consequent lack of economic returns to certification.

In summary, it seems likely that all three identified factors play a role in explaining the failure of formal qualifications to deliver earning gains. Such a failure in all probability reflects a corresponding failure to increase productivity to any significant degree. Overall, the evidence discussed here further strengthens criticisms of current government policies in the area of adult education and skills for being seriously misconceived in design and execution.

Our focus here has been on the qualification-bearing awards that continue to receive priority. But in closing, it is worth emphasizing that current policies are not the only option, whether one is concerned with personal development or with human capital formation itself. We have noted, at a number of points, that uncertificated, employer-designed and employer-organized training generally does lead to wage gains for recipients. As for 'leisure courses', as they have come to be known dismissively, their value to society goes well beyond the individual development and self-improvement that previous generations accepted as self-evidently worthwhile. Participation in such learning also shows significant, measurable effects in terms of health, citizenship and life satisfaction (Feinstein & Hammond, 2004) There are clear messages here for policy-makers interested in the welfare of the citizenry and willing to resist the largely pointless pursuit of qualification targets in favour of a more genuinely 'evidence-based' approach.

Acknowledgements

Support for the research described here was received from the DfES funded Centre for the Economics of Education and from the ESRC Teaching and Learning Research Programme (grant RES-139-25-0120) and is gratefully acknowledged. Opinions are, of course, entirely the authors' own.

Notes

1. Information on the characteristics of British adult learners is also available from a number of one-off survey sources (see La Valle & Finch, 1999; Hillage *et al.*, 2000), which produce figures ranging from 40% to 70% for participation, over specified time periods, in formal or informal learning.
2. The stability in participation reported by NIACE surveys is slightly surprising, since further education numbers have risen considerably during this period. However, there are a number of possible explanations, including increased participation levels among 16–19-year-olds and more efficient collation and reporting of all enrolments by colleges.
3. Qualifications were coded using the official National Qualifications Framework (referred to earlier). This distinguishes three types of qualifications, each with five levels. The categories used are shown in the Appendix. This framework produces a large number of different categories, but has the advantage of more precisely identifying the type of qualification acquired.
4. Information was also collected, in the 2000 sweep, about courses and training taken that did not lead to qualifications. For an analysis of these data see Vignoles *et al.* (2004).
5. The NIACE sample is typically about half the size of the NCDS one used here, and spread across all relevant age groups.
6. Two per cent of the sample reported acquiring more than four qualifications during the period.
7. Respondents were also less likely to have obtained a qualification if they had attended a school other than a comprehensive, grammar, secondary modern or public. This residual 'other' category (which includes special schools) involved only a small number of respondents.
8. These other reasons were coded as:
   1 needed it for the job you were doing at the time;
   2 because you thought it would lead to a better job later;
   3 to gain promotion;
   4 because moving to another job;
   5 to improve chances of getting any job;
   6 interest/for knowledge/keep mind active;
   7 to acquire/improve a specific area of knowledge, ability or skill;
   8 as a qualification for other courses;
   9 compulsory, as part of current job/arranged by employer;
   10 place on course available.
9. Improve job-specific skills; improve 'soft' skills (e.g. team working); offer general development, increase morale; reduce errors; reduce absenteeism; reduce turnover; improve health and safety; increase confidence; help staff be receptive to change.
10. The care home learners in the sample were not enrolled on NVQs at the time of study, but were taking specific literacy qualifications. The sample as a whole included learners working for NVQs of various types.
11. Attainment tests at 11 rather than at 7 were used here since they explained a greater amount of variance.
12. The precise changes associated with a change in highest level of qualification held were as shown in Table N1.

Table N1. Changes associated with a change in highest level of qualification held

	Robust				
	Coefficient	SE	t	$p > \|t\|$	
Male wages 2000					
Dependent variable, wage in 2000					
No change in level	−0.033	0.021	−1.590	0.112	
Level increased	−0.004	0.025	−0.160	0.872	
n					3283
r^2					0.222
Female wages 2000					
Dependent variable, wage in 2000					
No change in level	−0.027	0.018	−1.490	0.138	
Level increased	0.048	0.022	2.160	0.031[a]	
n					3454
r^2					0.284

[a] Significant at 5% level.

Control variables were highest school qualification, highest post-school qualification, mathematics and reading age 7 test scores, type of school, mother and father's years of education, father's SES, finances in 1974, union membership, employed in large firm in 2000, employed in public sector in 2000.

13. Eighteen per cent of 1991 respondents were out of the labour market at the time of interview. Seventy-one per cent of this group (n = 1260) made the transition into the labour market at some point during the next 10 years. Of this group, 372 also undertook qualification-bearing courses and we looked at the pattern of learning in relation to employment entry. Thirty-three per cent completed the learning and then entered employment, 42% entered employment and then obtained a qualification and 25% did both simultaneously. The pattern for those who changed jobs and undertook qualification-bearing courses between 1991 and 2000 is very similar.
14. Social returns for male graduates averaged over all age groups were estimated at 6–8%, compared with 7–9% for males who had entered higher education at age 18. The gap in private returns was slightly wider, at 9–11% for all entrants, compared with 11–13% for 18-year-old males.
15. £31 per week less in 1999 prices. Lower mature graduate pay was explained by a number of factors. Social origin was important, with fewer mature graduates having a middle class background. The institution of education also mattered, since mature graduates had a higher probability of having attended a polytechnic (note that the study covers the period up to 1992).
16. The non-UK labour market which is most studied by British training experts is undoubtedly the German. However, the highly structured element of German training, and the one which gives access to regulated employment, is the apprenticeship system, which is for the young and is not normally open to adults. Training for adults is far less regulated and is generally not tied to formal qualifications.
17. Between 1997 and 2002, in response to the Swedish recession, targeted education programmes for the unemployed/disadvantaged groups with relatively low academic skills were also emphasized. The 'Adult Education Initiative' for the unemployed moved large sums of money into adult education programmes rather than vocational training.
18. Participants in the special time-limited Adult Education Initiative directed at the unemployed were excluded from the sample.

19. The full title of the programme was The Learning Society: knowledge and skills for employment. It was funded by the Economic and Social Research Council to a total of £2.5 million and supported 14 projects based in universities and institutions across the UK (see especially Coffield, 2000).
20. If only certificated employees were allowed to practise, and certification opportunities were in short supply, then certificate holders could extract a rent (in the form of higher wages), but this does not appear to be the case in the care sector at present. On the contrary, government programmes underwrite the cost of accreditation and encourage training providers to sign up employers and workers.

Notes on contributors

Alison Wolf is Sir Roy Griffiths Professor of Public Sector Management, Department of Management, King's College London.

Andrew Jenkins is Senior Research Officer, Bedford Group for Lifecourse and Statistical Studies, Institute of Education, University of London.

Anna Vignoles is Reader in the Economics of Education, Bedford Group for Lifecourse and Statistical Studies, Institute of Education, University of London.

References

Acemoglu, D. & Pischke, J.-S. (1999) Beyond Becker: training in imperfect labor markets, *Economic Journal,* 109, 112–142.

Aldridge, F. & Tuckett, A. (2002) *Two steps forward, one step back* (Leicester, UK, NIACE).

Aldridge, F. & Tuckett, A. (2004) Business as usual?, *Adults Learning,* 2004 (May), 22–24.

Ananiadou, K., Jenkins, A. & Wolf, A. (2003) *The benefits to employers of raising workplace basic skills levels: a review of the literature* (London, NRDC).

Ananiadou, K., Jenkins, A. & Wolf, A. (2004) Basic skills and workplace learning: what do we actually know about their benefits?, *Studies in Continuing Education,* 26(2), 289–308.

Barnett, C. (1986) *The audit of war: the illusion and reality of Britain as a great nation* (London, Macmillan).

Barrett, A. & Hovels, B. (1998) Towards a rate of return on training: assessing the research on the benefit of employer-provided training, *European Journal of Vocational Training,* 14, 28–35.

Beinart, S. & Smith, P. (1998) *National adult learning survey 1997* (Sheffield, UK, Department for Education and Employment).

Bélanger, P. & Valdivielso, S. (Eds) (1997) *The emergence of learning societies: who participates in adult learning?* (Oxford, Pergamon).

Blundell, R., Dearden, L., Goodman, A. & Reed, H. (1997) *Higher education, employment and earnings in Britain* (London, Institute for Fiscal Studies).

Booth, A. L. & Snower, D. G. (Eds) (1996) *Acquiring skills* (Cambridge, UK, Cambridge University Press).

Cameron, S. V. & Heckman, J. J. (1993) *Determinants of young male schooling and training choices,* NBER Working Paper 4327 (Cambridge, MA, National Bureau of Economic Research).

Choudhury, S. (1994) New evidence on public sector wage differentials, *Journal of Applied Economics,* 26(3), 259–266.

Coffield, F. (Ed.) (2000) *Differing visions of a learning society* (vol. 1) (Bristol, UK, The Policy Press).

Coffield, F. (2002a) *A new strategy for learning and skills: beyond 101 initiatives* (London, Institute of Education).

Coffield, F. (2002b) Britain's continuing failure to train: the birth pangs of a new policy, *Journal of Education Policy,* 17(4), 483–498.
Coffield, F. (2004) Alternative routes out of the low skills equilibrium: a rejoinder to Lloyd and Payne, *Journal of Education Policy,* 19(6), 733–740.
Coffield, F., Steer, R., Hodgson, A., Spours, K., Edward, S. & Finlay, I., (2005) A new learning and skills landscape? The central role of the Learning and Skills Council, *Journal of Education Policy,* 20(5), 631–655.
Cooke, P., Cockrill, A., Scott, P., Fitz, J. & Davies, B. (2000) Working and learning in Britain and Germany: findings of a regional study, in: F. Coffield (Ed.) *Differing visions of a learning society* (vol. 1) (Bristol, UK, The Policy Press).
Dearden, L., Blundell, R. & Sianesi, B. (2005) Measuring the returns to education, in: S. Machin & A. Vignoles (Eds) *What's the good of education? The economics of education in the UK* (Princeton, NJ, Princeton University Press).
Department of Education and Science (DES) (1991) *Education and training for the 21st century* (London, HMSO).
Department for Education and Employment (DfEE) (1998) *The learning age: a renaissance for a new Britain* (London, DfEE).
Department for Education and Employment (DfEE) (1999) *Improving literacy and numeracy: a fresh start,* The report of the working group chaired by Sir Claus Moser (London, DfEE).
Department for Education and Skills (DfES) (2003) *21st century skills. Realising our potential* (London, DfES).
Department for Education and Skills (DfES) (2005) *Skills: getting on in business, getting on at work,* Part 1, *Overview* (London, DfES).
Dowswell, T., Hewison, J. & Millar, B. (1998) Enrolled nurse conversion: trapped into training, *Journal of Advanced Nursing,* 28, 540–547.
Egerton, M. (2000) Pay differentials between early and mature graduate men: the role of state employment, *Journal of Education and Work,* 13(3), 289–306.
Egerton, M. & Parry, G. (2001) Lifelong debt: rates of return to mature study, *Higher Education Quarterly,* 55(1), 4–27.
Ekström, E. (2003) *Earning effects of adult secondary education in Sweden,* Working paper 2003:16 (Stockholm, Sweden, Institute for Labour Market Policy Evaluation).
Eraut, M., Steadman, S., Trill, J. & Porkes, J. (1996) *The assessment of NVQs,* Research Report 4 (Brighton, University of Sussex Institute of Education).
European Commission (1993) *Growth, competitiveness, employment: the challenges and ways forward into the 21st century – White Paper.* COM (93)700. (Brussels, European Commission).
European Commission (1995) *White Paper on education and training, teaching and learning – towards the learning society.* COM (95)590. (Brussels, European Commission).
Evans, K. & Wolf, A. (2005a) *Enhancing 'Skills for Life': adult basic skills and workplace learning,* Annual Progress Report to ESRC (London, Institute of Education).
Evans, K. & Wolf, A. (2005b) Extending skills for life: sweep 1 findings (London, Institute of Education).
Feinstein, L. & Hammond, C. (2004) The contribution of adult learning to health and social capital, *Oxford Review of Education,* 30(2), 199–221.
Felstead, A., Gallie, D. & Green, F. (2002) *Work skills in Britain 1986–2001* (London, DfES and SKOPE).
Finegold, D. & Soskice, D. (1988) The failure of training in Britain: analysis and prescription, *Oxford Review of Economic Policy,* 4(3), 21–53.
Gorard, S., Fevre, R. & Rees, G. (1999) The apparent decline of informal learning, *Oxford Review of Education,* 25(4), 437–454.
Gorard, S., Rees, G. & Selwyn, N. (2002) The 'conveyor belt effect': a re-assessment of the impact of National Targets for lifelong learning, *Oxford Review of Education,* 28(1), 75–89.

Green, A., Wolf, A. & Leney, T. (2000) *Convergence and divergence in European education and training systems* (London, Institute of Education).

Green, F., Machin, S. & Manning, A. (1996) The employer size-wage effect: is monopsony the explanation?, *Oxford Economic Papers,* 48, 433–455.

Grubb, W. N. & Lazerson, M. (2004) *The education gospel: the economic power of schooling* (Cambridge, MA, Harvard University Press).

Heckman, J. (1999) *Policies to foster human capital,* Working Paper 7288 (Cambridge, MA, National Bureau of Economic Research).

Hewison, J., Dowswell, T. & Miller, B. (2000) Changing patterns of training provision in the National Health Service: an overview, in: F. Coffield (Ed.) *Differing visions of a learning society* (vol. 1) (Bristol, UK, The Policy Press).

Hildreth, A. (1999) What has happened to the union wage differential in Britain in the 1990s?, *Oxford Bulletin of Economics and Statistics,* 61(1), 5–32.

Hill, E. T. (2001) Post-school age training among women: training methods and labour market outcomes at older ages, *Economics of Education Review,* 20, 181–191.

Hillage, J., Uden, T., Aldridge, F. & Eccles, J. (2000) *Adult learning in England: a review,* Report 369 (Brighton, UK, Institute for Employment Studies).

House of Commons Education and Skills Committee (2005) *National skills strategy: sixth report of session 2004–5. Volume II, oral and written evidence* (London, House of Commons), p. 10.

Jenkins, A. (2004) *Women, lifelong learning and employment,* Discussion Paper 39 (London, Centre for the Economics of Education).

Jenkins, A. & Wolf, A. (2004) *Regional variations in adult learning and vocational training: evidence from NCDS and WERS 98,* Discussion Paper 37 (London, Centre for the Economics of Education).

Jenkins, A. & Wolf, A. (2005) Employers' selection decisions: the role of qualifications and tests, in: S. Machin & A. Vignoles (eds) *What's the good of education? The economics of education in the UK* (Princeton, NJ, Princeton University Press).

Jenkins, A., Vignoles, A., Wolf, A. & Galindo-Rueda, F. (2002) *The determinants and effects of lifelong learning,* Discussion Paper 19 (London, Centre for the Economics of Education).

Jenkins, A., Vignoles, A., Wolf, A. & Galindo-Rueda, F. (2004) The determinants and labour market effects of lifelong learning, *Applied Economics,* 35, 1711–1721.

Jessup, G. (1991) *Outcomes: NVQs and the emerging model of education and training* (London, Falmer).

Keep, E. (1997) 'There's no such thing as society …': some problems with an individual approach to creating a Learning Society, *Journal of Education Policy,* 12(6), 457–471.

Keep, E. (1999) UK's VET policy and the 'Third Way': following a high skills trajectory or running up a dead end street?, *Journal of Education and Work,* 12(3), 323–346.

La Valle, I. & Finch, S. (1999) *Pathways in adult learning research,* Report RR 137 (London, Department for Education and Employment).

Lloyd, C. & Payne, J. (2003a) The political economy of skill and the limits of educational policy, *Journal of Education Policy,* 18(1), 85–107.

Lloyd, C. & Payne, J. (2003b) Forget birth pains, we haven't got past the conception stage yet. A reply to Frank Coffield's 'Britain's continuing failure to train: the birth pangs of a new policy', *Journal of Education Policy,* 18(5), 563–568.

Machin, S. & Vignoles, A. (Eds) (2005) *What's the good of education? The economics of education in the UK* (Princeton, NJ, Princeton University Press).

Mager, C., Robinson, P., Fletcher, M., Stanton, G., Perry, A. & Westwood, A. (2000) *The new learning market* (London, IPPR and FEDA).

Meadows, P. & Metcalf, H. (2005) *Evaluation of the impact of 'Skills for Life' learning. Report on sweep 1* (London, DfES).

Murnane, R. J., Willett, J. B. & Tyler, J. H. (1999) *Who benefits from obtaining a GED? Evidence from high school and beyond,* Working Paper Series 7172 (Cambridge, MA, National Bureau of Economic Research).

National Skills Task Force (2000) *Skills for all: proposals for a national skills agenda* (London, DfEE).
Office for National Statistics (2005) *Labour force survey* (London, Office for National Statistics).
Organisation for Economic Cooperation and Development (OECD) (2000) *Where are the resources for lifelong learning?* (Paris, OECD).
Organisation for Economic Cooperation and Development (OECD) (2003) *Beyond rhetoric: adult learning policies and practices* (Paris, OECD).
Organisation for Economic Cooperation and Development (OECD) (2004a) *Education at a glance: OECD indicators* (Paris, OECD).
Organisation for Economic Cooperation and Development (OECD) (2004b) *Policy brief: lifelong learning* (Paris, OECD).
Owen, G. (1999) *From Empire to Europe: the decline and revival of British industry since the second world war* (London, HarperCollins).
Performance and Innovation Unit (PIU) (2001) *In demand: adult skills in the 21st century* (London, PIU).
Prais, S. J. (1995) *Productivity, education and training. An international perspective* (Cambridge, UK, Cambridge University Press).
Ramsden, M., Bennet, R. & Fuller, C. (2004) The Learning and Skills Council and the institutional infrastructure for post-16 education and training: an initial assessment, *Journal of Education and Work,* 17(4), 397–420.
Rees, H. & Shah, A. (1995) Public–private sector wage differentials in the UK, *Manchester School,* 63(1), 52–68.
Rubenson, K. (1997) Sweden: the impact of the politics of participation, in: P. Bélanger & S. Valdivielso (Eds) *The emergence of learning societies: who participates in adult learning?* (Oxford, Pergamon).
Sanderson, M. (1999) *Education and economic decline in Britain 1870 to the 1990s* (Cambridge, UK, Cambridge University Press)
Sargant, N. (2000) *The learning divide revisited: a report on the findings of a UK-wide survey on adult participation in education and learning* (Leicester, UK, National Institute of Adult Continuing Education).
Skills Task Force (2000) *Skills for all: research report from the National Skills Task Force* (London, DfEE).
Stanton, G. (1996) *Output related funding and the quality of education and training* (London, International Centre for Research on Assessment, Institute of Education).
Steel, J. and Sausman, C. (1997) *The contribution of graduates to the economy—rates of return,* National Committee of Inquiry into Higher Education (Dearing Committee) Report no 7 (London, HMSO).
Taylor, R. (2005) Lifelong learning and the Labour governments 1997–2004, *Oxford Review of Education,* 31(1), 101–118.
van der Kamp, M. (1997) The Netherlands: impacts of a new policy environment, in: P. Bélanger & S. Valdivielso (Eds) *The emergence of learning societies: who participates in adult learning?* (Oxford, Pergamon).
Vignoles, A., Galindo-Rueda, F. & Feinstein, L. (2004) The labour market impact of adult education and training: a cohort analysis, *Scottish Journal of Political Economy,* 51, 266–280.
Wolf, A. (2001) Qualifications and assessment, in: R. Aldrich (Ed.) *A century of education* (London, RoutledgeFalmer), 206–227.
Wolf, A. (2002) *Does education matter? Myths about education and economic growth* (London, Penguin).
Wolf, A. (2004) Education and economic performance: simplistic theories and the policy consequences, *Oxford Review of Economic Policy,* 20(2), 315–333.

Appendix. National qualifications framework

General (Academic)

Level 5	Higher Degree
Level 4	Degree
	HE Diploma
Level 3	A-level
	AS-level
	Scottish Highers
	Scottish Certificate of 6th Year Studies
Level 2	GCSE grade A*–C
	O levels grade A–C
	O levels grade D–E
	CSE grade 1
	Scottish standard grades 1–3
	Scottish lower or ordinary grades
Level 1	GCSE grade D-G
	CSEs grades 2–5
	Scottish standard grades 4–5
	Other Scottish school qualification

Vocationally related (Applied)

Level 4	BTEC Higher Certificate/Diploma
	HNC/HND
Level 3	Advanced GNVQ
	BTEC National Diploma
	ONC/OND
Level 2	Intermediate GNVQ
	BTEC First Certificate
	BTEC First Diploma
Level 1	Foundation GNVQ
	Other GNVQ

Occupational (Vocational)

Level 5	NVQ level 5
	PGCE
	Professional degree level qualifications
Level 4	NVQ level 4, Nursing/paramedic
	Other teacher training qualification
	City & Guilds Part 4
	RSA Higher Diploma
Level 3	NVQ level 3
	City & Guilds Part 3/Final/Advanced Craft
	RSA Advanced Diploma
	Pitmans level 3

Level 2	NVQ level 2
	Apprenticeships
	City & Guilds Part 2/Craft/Intermediate
	City & Guilds Part 1/Other
	RSA First Diploma
	Pitmans level 2
Level 1	NVQ level 1
	Other NVQ
	Units towards NVQ
	RSA Certificate/Other
	Pitmans level 1
	Other vocational qualifications
	HGV