

Equity and lifelong learning: Lessons from workforce development in Scotland

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Introduction

In a recent discussion paper on social mobility (Cabinet Unit Strategy Office, 2008), it was noted that the majority of the workforce of the next decade are already aged over 25. As a result, increasing their social mobility requires improving their opportunities to progress in the workplace. Educational outcomes in Scotland continue to be strongly associated with social class and whilst there has been general improvement, the performance of the bottom 20% has failed to keep pace with this trend (OECD, 2007). This paper focuses on workplace learning, where, as we demonstrate below, inequalities which initially arise at school level are further accentuated. Case studies of six SMEs conducted as part of a European study of lifelong learning are used to identify some of the reasons underlying these inequalities. Whilst all of the organisations had a positive approach to employee development, they differed in the type of work they undertook and the composition of the workforce. Employees in knowledge intensive organisations were immersed in a culture where learning was an expected and integral part of their working lives, where much support was provided for formal and informal learning and where workers themselves were encouraged to take personal responsibility for their own professional development. By way of contrast, more traditional manufacturing and service sector organisations had a more restricted approach to learning, encouraging employees to undertake courses which would give them the skills to do their jobs more effectively, but with less focus on their wider growth and development. Interestingly, in all organisations managers were somewhat sceptical about the idea of learning for its own sake. Even in the most knowledge intensive organisations, managers saw company profitability as paramount and sought to rein in some of the more expansive ideas of lifelong learning promoted by employees and HR managers. Particularly as the economic mood darkens, this study provides some interesting insights into the barriers to be overcome in using workplace learning to make Scotland smarter, wealthier and fairer.

Government policy on formal learning in the workplace

Successive Scottish Governments have struggled to find ways of improving Scotland's economic growth and social well-being. A simple reading of human capital theory suggests that states with high levels of investment in education and lifelong learning, and a generally well educated population, should enjoy greater growth and prosperity. Despite having a well qualified population (only 16.1% of working age adults has a qualification below ISCED 3c and 29.8% below ISCED 3a), Scotland appears to have lower economic growth than the rest of the UK and other similar small countries (Scottish Government, 2007). However, there is considerable variation between different locations; in the 15% most deprived areas, 34.6% do not have an ISCED 3c qualification and this rises to 49.5% for ISCED 3a (Scottish Government, 2008). In addition, a relatively high proportion of the Scottish working age population is economically inactive, and 9% claim Incapacity Benefit

The Scottish Government sees lifelong learning as a social policy arena where it is able to exert some degree of economic control, and various strategies (Scottish Executive, 2003; Scottish Government, 2007a) have been produced with the aim of raising the skill level of the working age population. The Scottish Government's Economic Strategy (Scottish Government, 2007b) specified the following actions in relation to workforce development:

- focus on working with employers and employees to increase the effective utilisation and demand for skills;
- ensure that our national training programmes meet the needs of individuals and employers;

- ensure flexible provision which is responsive to the needs of individuals, employers and the wider economy;
- ensure a funding system for Further and Higher Education through the Scottish Funding Council that is responsive to the needs of individuals, employers and the wider economy; and
- bring together the public agencies involved in delivering information, advice and guidance services and skills provision in the new skills body to build improvements around the needs of individuals (Scottish Government, 2007: 24).

The new skills body, Skills Development Scotland (SDS), has now been established, drawing together Careers Scotland, the Scottish University for Industry and the skills and learning functions of Highlands and Islands Enterprise and Scottish Enterprise. Whilst supply side issues have been addressed by encouraging individuals to improve their qualifications, the Government believes more work needs to be done in stimulating employer demand for skills and using them more effectively.

The Government's Skills Strategy identifies FE colleges and universities as essential in the development of a highly qualified workforce, but employers are less inclined to use formal education provision, preferring to purchase bespoke training from private training providers. A survey of employers showed that 60% used private training providers with only 24% using colleges and 10% using Higher Education Institutions. Forty-seven percent used staff on site and 38% used industry bodies or professional associations (Futureskills, 2006).

The range of educational provision available to people in the workplace is quite complex, and one difficulty has been ensuring that employers are aware of the available options. Further Education Colleges offer mainly vocational courses from basic to sub-degree level and some non-vocational non-advanced courses. Local authorities have responsibility for community learning and development and offer literacies and other basic educational programmes aimed at adult learners. Voluntary organisations such as the WEA also offer basic education to adult learners. The National Training Programme includes the following:

- Modern Apprenticeships are available to those aged over 16 in employment and provide training at craft, technician and management level to SVQ 3 or above (ISCED 3 or above). This programme is being expanded and the current Skillseekers programme is being phased out;
- Get Ready for Work offers training for young people who need additional support to gain employment or further training; and
- Training for Work provides specific, job-related training for adults to help them enter or re-enter the labour market.

There are current initiatives to provide more accredited workplace learning through the use of the Scottish Credit and Qualifications Framework. Some Further Education colleges have developed links with employers and are working in partnership to accredit work-based learning.

Funding for workforce development is also complex. Since 2005, Scottish colleges and universities have been funded by the Scottish Funding Council. Workplace learning and training is funded by the Scottish Executive and/or by employers. In 2004/5 the Executive committed about £220m to programmes and schemes such as Modern Apprenticeships, Enterprise in Education, the Scottish Union Learning Fund and the Scottish Skills Fund. However, different arrangements apply to specific programmes. For example, Modern Apprenticeships are a combination of paid employment and training and the training is paid for by Scottish Enterprise or the employer.

For individual learners, there is also a patchwork of support. Learners who have a limited income and/or are unemployed may be able to access a range of allowances, including Individual Learning Accounts (ILA) and fees and, in some cases allowances for specific

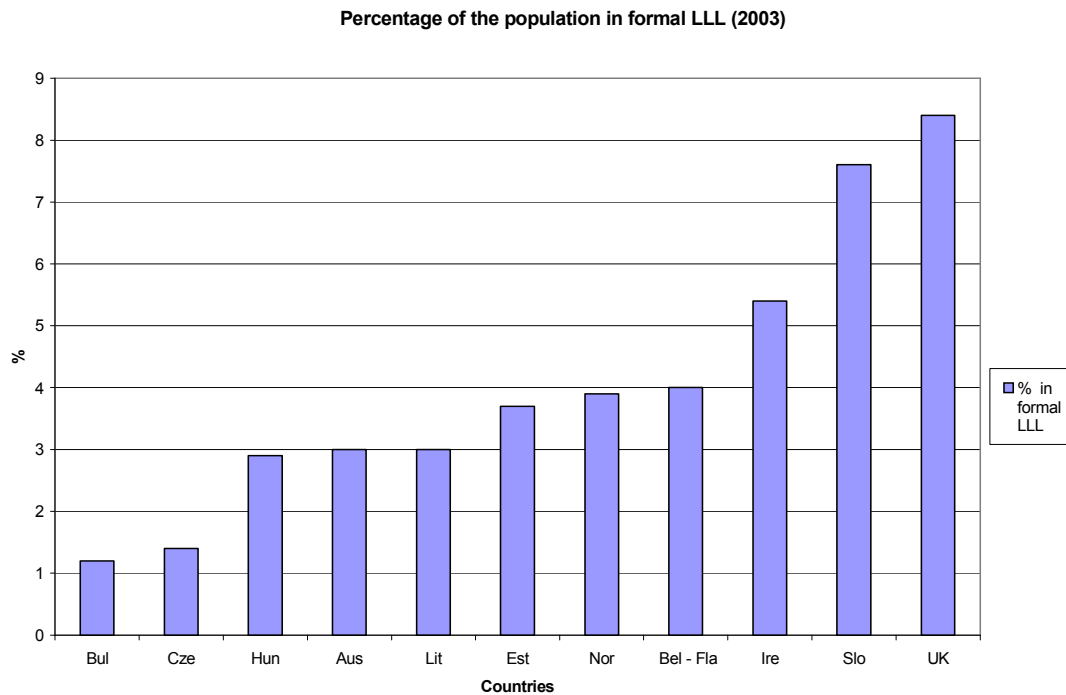
courses. All Scottish and EU students, but not those from the rest of the UK, are entitled to free tuition up to Masters level; however, this applies only to the first degree and to full-time students. Course fees have to be paid for any subsequent course which is at the level already attempted and/or achieved. As these patchy arrangements suggest, there are on-going debates about whether work-related training should be funded by the state, the employer or the individual beneficiary and decisions seem to be based on precedent rather than principle.

Equity and workplace learning

Access to training in the workplace has been identified as an important contributor to subsequent social mobility, particularly for individuals who left school with few or no qualifications. As signalled in the UK Government's Equalities Review (Cabinet Office, 2006; 2007), there is a growing focus on the need to measure social outcomes in terms of equality of process, autonomy and outcome. Following Sen's (1985; 1997) conceptual framework, a number of domains were identified mapping on to key capabilities, and one of these is education and lifelong learning. Access to high quality workplace learning, then, is not just to do with promoting economic growth, as emphasised in Government Economic Strategy, but is also an important means of creating a more just and equal society. What, then, can be learnt from examining recent Scottish statistics on access to lifelong learning?

Eurostat does not provide separate data for Scotland on participation in lifelong learning. Looking at UK data in comparison with other European countries participating in the LLL2010 project (Figure 1), it is evident that a particularly high proportion of the adult population is in formal education in the UK, followed by Slovenia and Ireland. This is attributable to the development of non-traditional routes such as part-time study and distance learning, and open access arrangements so that students without formal qualifications may be admitted to higher level courses. High participation rates also reflect the fact that a relatively large number of people in the UK leave school without qualifications compared with other EU countries. Of the old member states, Austria has a relatively low proportion of adults in formal education, with Estonia and Lithuania having higher proportions of adults in formal education. Austria has a particularly rigid system of higher education, with students requiring formal qualifications for course entry and having to follow strictly pre-specified courses with no modularisation. As a result, many undergraduates who go straight from school to university do not graduate until they are nearly thirty, and the system is very difficult for adults without formal qualifications to access.

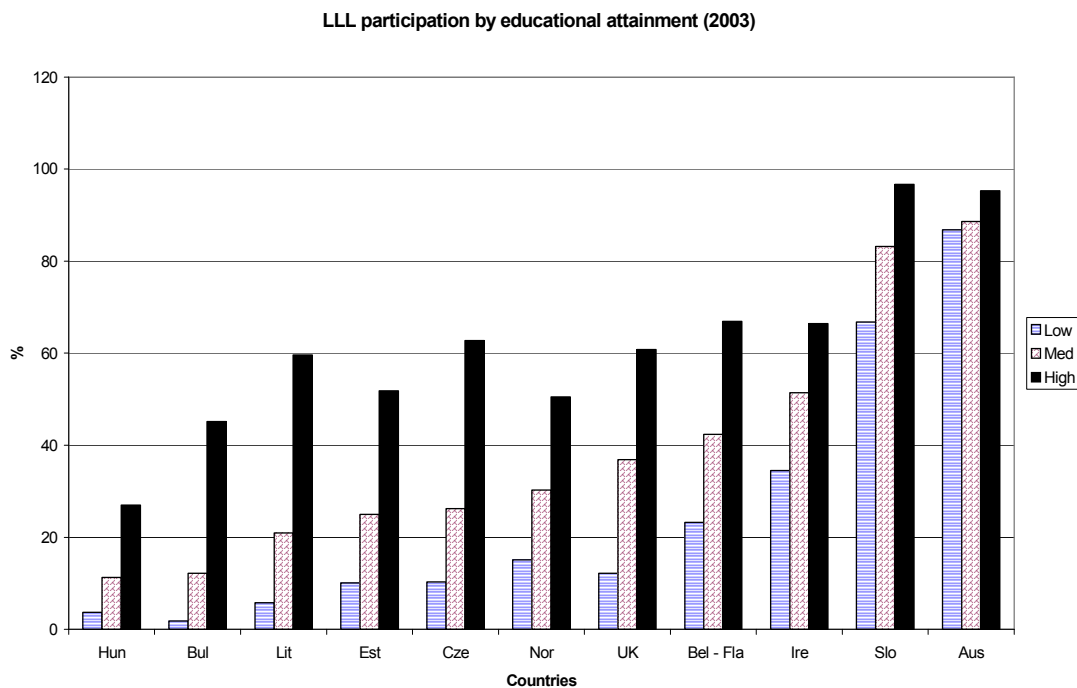
Figure 1



Source: Eurostat, 2005 Formal education refers to education and training in school, university or college. Reference period: 12 months (*European Labour Force Survey, Eurostat*).

Figure 2 shows participation in any form of lifelong learning (formal, non-formal and informal) in countries participating in the LLL2010 project.

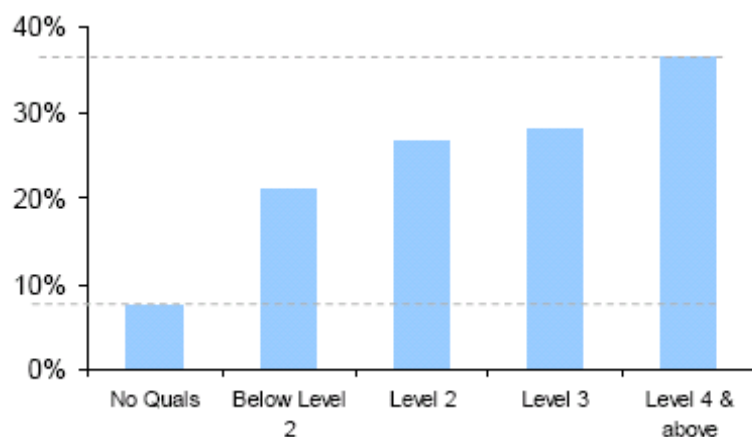
Figure 2



Source: Eurostat, 2005 lifelong learning refers to formal, informal and non-formal education and training. Reference period: 12 months (*European Labour Force Survey, Eurostat*)

The broad pattern to emerge here is that in all countries, those with higher levels of educational attainment are most likely to be involved in any form of lifelong learning. In terms of the relative position of the countries, the data should be treated cautiously because of the inclusion of non-formal learning in some countries such as Austria and its exclusion from other countries. Figure 3 shows that in Scotland, people with higher qualifications are more likely to have engaged in job related training over the past three months.

Figure 3: Per cent of Scottish employees who have undertaken job related training in the past 3 months, by highest qualification level, 2007¹



¹ Labour Force Survey Q2 2007

A survey of employers conducted by Futureskill in 2006 showed that those most likely to have access to workplace learning were employees in the following groups:

- Younger workers
- Women, except those under 24
- Those with higher qualifications
- Those employed in the public sector. Employees in services industries, agriculture and fishing are least likely to receive training
- Those in larger workplace

Factors impinging on approaches to workplace learning

In this section, we briefly review the factors which promote lifelong learning, and the variables within particular workplaces which influence employer and employee attitudes.

Global economic changes

Over the past thirty years in the UK and other industrialised countries, there have been major changes in the composition of the labour market, with the expansion of the service sector and the decline of the manufacturing sector, and the growth of skilled as opposed to unskilled jobs (Cabinet Office Strategy Unit, 2008). The latter shift has been described as 'skill biased technical change' by Brakman (2006), who has argued that production technology has favoured skilled over unskilled labour by increasing its relative productivity, and, therefore, its relative demand. Low-skilled routine tasks have become automated and demand has shifted away from low-skilled towards skilled labour that can utilise more productive technology. Globalisation clearly plays a part here too, with routine production processes increasingly taking place in less developed countries where labour is cheaper. As countries like China and India develop the skills of their population, skilled production processes may also move away from developed countries, unless the workforces of these countries are able to offer a level of knowledge and skills which cannot be found elsewhere. There are thus important economic

reasons for the governments of developed countries to invest in the ongoing development of the working age population, and to encourage employers to recognise the urgency and necessity of fostering workplace learning. The extent to which government is able to communicate with employers, and the extent to which workers are aware of the the broader forces of globalisation, are likely to impact on attitudes and uptake of learning opportunities at work.

Company ethos and learning cultures

Fuller and Unwin (2004) maintain that the learning culture within an organisation can be placed along an expansive-restrictive continuum, with major implications for approaches to workplace learning. This framework provides a conceptual and analytical tool for evaluating the quality of learning environments and for analysing an organisation's approach to workforce development. The framework draws on Lave and Wenger's (1991) situated learning theory when developing their expansive-restrictive continuum. They identified three participatory dimensions: i) opportunities for engaging in multiple (and overlapping) communities of practice at and beyond the workplace; ii) access to a multidimensional approach to the acquisition of expertise through the organisation of work and job design; iii) the opportunity to pursue knowledge-based courses related to work. Organisations with a restrictive approach impose many limitations on learning, whereas those with an expansive approach foster a wide array of formal, non-formal and informal approaches to and opportunities for learning. By self-selection, all enterprises and employees participating in this study were expansive in their approach to workplace learning, since the company managers offered employees opportunities to develop, and the employees interviewed had taken advantage of these opportunities. However, there were interesting variations in the motivations of employees in different types of organisations and the aims of the training to which they had access.

Learning cultures, professional identity and regulation

As noted above, there have been major changes in the labour market during the post-war period, and a major feature of such changes has been the expansion of the professions, with particular approaches to lifelong learning based on ideas of disciplinary expertise and commitment to professional development. Hoskin and Anderson-Gough (2004) note the following key aspects of becoming a professional: '(a) attaining expert disciplinary knowledge, and (b) engaging in disciplinary conduct, focused on examination passing, arguably supplemented by (c) a commitment to self-discipline in order to become a real professional'. This commitment to formative and ongoing professional development is underpinned by professional regulatory bodies, which stipulate the standards which individual must demonstrate in order to be registered initially, and the CPD activities which they must pursue in order to maintain their membership of the professional body. Although skilled workers may also have to obtain particular types of accreditation to undertake certain tasks, they have tended to be less tightly regulated than workers in the professions. However, the extension of regulatory and accreditation standards into the field of areas such as social care has meant that many workers who were previously unqualified have been compelled to undertake formal qualifications in the workplace. The presence of professional workers in an organisation, and the existence of a regulatory framework, is likely to have a major impact on employers' and workers' attitudes to formal workplace learning.

The research

This paper draws on approaches to workplace learning in six small to medium sized enterprises in Scotland. A case study was developed of each firm, focusing on its activities and goals, the nature of its workforce and the role played by formal education in workforce development (see Table 1 for further details of case study institutions). The research forms part of a European Sixth Framework project entitled: *Towards a Lifelong Learning Society in Europe: The Contribution of the Education System* (www.lll2010.tlu.ee). The project is being

conducted in 13 geographically diverse European countries and consists of five inter-linked subprojects. The exploration of workplace learning constitutes Subproject 4. The main aim of this subproject was to examine the role of formal education in workforce development, that is, learning leading to certification within the Scottish Qualifications Framework. However, attention was also paid to the role of non-formal learning, which includes CPD activities, and informal learning, which includes any learning, such as personal reading projects or learning from observing or talking to colleagues at work.

The case studies of SMEs used a range of data sources, including analysis of company websites, promotional material and annual reports. Semi-structured interviews were conducted with managers, line-managers and employees focusing on employee participation in formal education leading to a qualification (for more detailed information see Table 1).

Three of the case study firms were involved production and three were involved in the delivery of services to the public or to other businesses. The companies were recruited through contacts at Further Education (FE) Colleges (n=3) or contacts with SMEs made through previous participation in research projects (n=3). Within each firm, the main criterion for selecting employees for interview was that they were undertaking formal learning leading to a qualification. The study therefore makes no claim to represent the SME sector or indeed employees participating in formal workplace learning.

Three of the companies selected were high skilled 'knowledge economy' organisations, in which almost all employees had degree-level qualifications. These were Company C, undertaking oil and gas exploration, Company D, an architects firm, and Company E, a commercial archaeology business. The other three organisations were predominantly medium skilled enterprises, including some employees with tertiary level qualifications whilst others were recruited with few or no qualifications, but went on to acquire specific skills. Company A, located in the central belt, manufactured copper cylinders and had the least qualified workforce. Company B, a west coast firm, produced industrial refrigeration equipment and had a diverse workforce. Forty per cent had tertiary-level qualifications and a few were chartered engineers who had patented a range of refrigeration techniques and processes, whilst others had much lower level qualifications. Company F was a private training organisation specialising in vocational skills training for a range of industries such as construction, and mining, as well as delivering driving and health and safety certification. In this firm, trainers were expected to have recently obtained the qualification they were then helping others to acquire, so that lifelong learning was an on-going process. There are of course many small firms in Scotland where employees have much lower formal qualifications and where no one is undertaking formal education, and these are not represented in our study. Nonetheless some interesting differences emerged between attitudes to lifelong learning within the organisations and amongst individual employees, and these are discussed below.

Within the knowledge-intensive organisations, individual employees often took responsibility for organising their own courses, some of which were geared towards professional accreditation, for example, in the field of accountancy, architecture or archaeology. These were clearly of benefit both to the company and to the individual. The companies had specified training budgets and would often cover the full cost of the training course. However, it was emphasised that the learning must not impact on the main activities of the firm and therefore, by and large, had to take place in the employee's own time. However, some additional leave might be provided, for example, in the oil exploration firm, the individual studying for accountancy exams was given an additional two weeks off for revision and examination leave. One organisation had a contractual arrangement whereby employees were expected to repay course fees if they left the firm within a certain timeframe. At Company C, the oil exploration firm, employee development was linked to their annual bonus. The individual's development goals were established during bi-annual appraisals with the line manager, during which the employee would sign up to two prescribed behavioural and

technical job-specific competences. The responsibility to arrange the appraisal was placed on the employee, but the financial incentives were clear.

The medium-skilled organisations tended to focus on job-specific training that was often driven by statutory training requirements. For recent recruits with few or no previous qualifications, training was often initiated by company management and organised on a day-release basis. Companies A and B were both traditional manufacturing companies attracting a predominantly male workforce. As they faced challenges recruiting staff and had an ageing workforce, they often hired unqualified staff and provided job-specific training in-house. Whereas Company A, the copper cylinder manufacturer, tapped into public funding to sponsor a Modern Apprenticeship, Company B, the refrigeration firm, had a well-established in-house apprenticeship system in place. For instance, the design department delivered courses on company products and systems and the Health and Safety Manager delivered a Risk Assessment course. Internal career progression was encouraged and occasionally employees would be “cherry picked” to undergo formal training such as part-time university degrees. It was possible within this company to progress, and the Chief Executive had started as an apprentice. Within this firm, employees sometimes undertook part-time degrees and in such circumstances, they were expected to attend classes in their own time.

Findings

Managers' views of formal learning

Different benefits of formal learning were identified by the knowledge-intensive and traditional organisations. The knowledge-intensive organisations mentioned the benefits of bringing new knowledge into the business to update all employees. For example, the architects firm, (Company D) reported that employees studying for their professional exams were often very well informed about recent legislation and could feed this into CPD activities required by the professional body. New knowledge and up-to-date methods and techniques were important for the development of the firm and the learner was, on completion of the course, expected to take on more responsibility. Conversely, the manager at Company E, a commercial archaeologist, had encouraged all employees to pursue a formal management qualification (ISCED level 5b), since employees were generally well qualified archaeologists, but lacked business acumen and commercial skills.

Within the traditional medium skilled organisations, emphasis was placed on the accreditation of learning:

A lot of [the proof that training has helped] is getting a certification to say that you're a competent person. With the skill cards and the safety cards, people have demonstrated that they can do that and they've got the ticket to prove it (Male HR Manager, Company B, refrigeration firm).

However, tensions were evident between statutory training requirements, the training needs of the firm and the challenges associated with accessing public funding to cover costs. One manager explained:

We are not a training establishment; we are a cylinder making company. I want to make our people better at what they do so that the company becomes better, but there's not any point in training people so that they will have no benefit to the company especially if it's costing money. We are quite happy taking lots of the intangibles into account, but sometimes you are struggling to find them. (Male Managing Director, Company A, copper cylinder manufacturer)

Operating within niche markets, these organisations required very specific training and sometimes the courses run by FE colleges were simply too general to meet their needs.

Since their prime concern was survival in the market place, providing their employees with portable qualifications to enhance their future employment prospects was a very low priority. Indeed, having recruited and trained an employee over a number of years, they were fearful of losing this valuable resource.

Employees' views of formal training

In knowledge-intensive organisations (e.g. companies C (oil exploration) and D (architecture)) the employees had chosen their courses to provide them with the qualifications required by the professional regulatory body. The courses consisted predominantly of self-directed learning and the employees were highly motivated to pursue the qualifications, since these were vital for future professional employment. For this reason, they were willing to sacrifice their free time to study for the exams. They generally felt supported within the companies and argued that the firms recruited a certain type of ambitious person likely to progress. If they delivered, the company would reward them with promotion and allow them greater freedom to contribute to the business. As noted earlier, these companies had policies in place relating to funding of training and providing career guidance for employees. However, it was evident that this could have detrimental effects on the learners' personal life and a number of employees stated that they "put their personal life on hold" until the completion of their training:

Friends found it difficult when I couldn't come out, which was quite a lot because three months a year I was really committed to my exams, and that went on for three years. I had a girlfriend at the time when I started studying who I split up with. I think she found it really tough when I made that commitment because it really changed that relationship. (Male participant 1, Company C (oil exploration), professional qualification in accountancy).

Generally highly educated employees appeared more likely to participate in formal learning and be pro-active in finding an appropriate course, but our study showed that employees from non-traditional learning backgrounds, with the right support from management, training institutions and colleagues, might develop an increased interest in learning:

When I first went it was just a case of getting out of work for a day, but then the teacher pulled me in and said 'Look if you are just going to come here and not learn I would rather you just went to your work'. So I started working I started enjoying it a lot more and looking forward to going to it instead of saying, 'Oh, I've got college today'. So effort and wanting to go and wanting to do it makes it a lot better. (Male employee 2, Company A (copper cylinder manufacturer), undertaking SVQ in welding and fabrication at FE college)

Some of the managers highlighted a tension between the training the employer thought it worthwhile supporting and the personal interests of the employee. Although many knowledge-intensive organisations funded learning that would benefit the organisation, it was emphasised that the learning must not impinge on the main activity of the business. For example, in the oil exploration firm, an employee was allowed time to study for professional accountancy exams, but was aware that if he wanted to gain a legal qualification, his next career development plan, this would have to be done in his own time. In the archaeology firm, too, the managing director was willing to give employees time to gain management qualifications, but higher level archaeology-related degrees were not supported by the firm. This tension appeared even greater in the traditional manufacturing/training organisations. Whereas the employers focused on job-specific training, employees who had the opportunity to participate in formal learning appreciated the wider and more general understanding promoted by externally run courses, such as the Modern Apprenticeships. The portability of this type of qualification was also appreciated; whereas the employees taking the short course in welding and fabrication intended to stay in the company, the person studying for the Modern Apprenticeship intended

to gain further qualifications and ultimately work as an under-water welder, a much better paid job.

To summarise, organisations with a highly skilled workforce appeared to offer employees more formal learning opportunities than employers in traditional medium-skilled industries and placed greater responsibility on employees to manage their own learning. Traditional manufacturing firms appeared mainly to be driven by statutory training requirements and appeared less likely to apply new skills in the workplace. Although employees from non-traditional learning backgrounds initially appeared less willing to undertake formal learning, the study showed that with the right support, employees were likely to become engaged in learning, rather than seeing this as an imposition.

The organisation of work and the status of workplace learning

The knowledge-intensive firms fulfilled many of the criteria that characterise organisations with an expansive approach to workplace learning. They represented new-capitalist firms (Sennett, 2006) that focused on innovation and risk taking. A director of the oil and gas exploration firm emphasised that a five year business plan would impede, rather than assist their operation. In order to respond instantly to new opportunities as they arose, a much shorter planning horizon was required. These companies went to great lengths to promote social cohesion within the organisation, for example, running company social events, and they also placed a premium on communication between company executives and workers. In the oil and gas exploration company, the managing director would often drop into people's offices to ask how the work was progressing. At the same time, the board of directors constantly re-assessed the employee profile and instigated redundancy programmes when deemed to be necessary to ensure profitability.

The organisation of work often encouraged employees to engage in multiple and overlapping communities of practice. For example, in Company D, an architects firm with around thirty employees, all employees worked in teams of about 5 members of staff that shared a big table in the office to facilitate communication. As the teams varied depending on projects, employees moved around the office interacted with a range of people. Newly qualified architects were considered valued members of the team by bringing new knowledge into the workplace such as recently updated legislation.

[The architects] are given certain responsibilities within the office in terms of their position within a project or within a team, and we allow them to grow within their position within the office, take on more responsibility as and when they feel they can manage that. And just gain experience through working on projects and working with other team members in the office. (Male line manager, Company D (architects firm))

The layout of the workplace and organisation of work offered fewer opportunities for employees to engage in multiple communities of practice. In Company A, the copper cylinder manufacturer, the open-plan factory encouraged communication between welders and the line manager, allowing workers to seek advice on particular tasks when required. It was evident that much learning took place by working closely alongside a more experienced worker:

A lot of people can do a lot of different jobs and they are all easy to talk to and you can ask them anything. And there is a lot of them have an answer for you. It means you don't have to go to higher management. Everybody rood about you knows what you have to do. So they keep you right. Any questions just ask anyone and they will try to help you along as best they can. (Male participant, SCQ welding and fabrication day release college course, Company A, copper cylinder manufacturer)

Whilst people on the shop floor worked closely together, managers were not routinely consulted about work related issues. The managing director's office was located off the

production area and close to the clerical office. There was also a division in the factory between the male manual workers and the female administrative staff, with the latter having far fewer opportunities to participate in formal learning. The organisation of work and strictly divisional meetings offered few opportunities for cross-communication in the company.

Human resource management and employee autonomy

All the firms in this study had HR departments with an interest in employee development and company training policy. However, the extent to which HR departments managed employees' learning varied across companies. Within knowledge-intensive organisations, the employee took a large degree of responsibility for their own professional development and activities such as studying for additional qualifications (oil recovery firm, architects firm) and conference attendance (archaeology firm) often took place, at least in part, in the employee's own time. At the same time, much informal learning took place on a day-to-day basis. There was an expectation that the employee would be interested in learning and motivated to pursue formal learning outside working hours, since this would be of significant benefit to themselves as well as the firm. Planned off-the-job learning offered employees the opportunity to reflect on their own work practice and development (Fuller and Unwin, 2004). The approaches to learning exhibited by workers in knowledge-intensive firms was associated with their commitment to becoming or sustaining themselves as members of a professional community, rather than people who required to be managed by an HR department.

Within the traditional companies, learning tended to be restricted to the workplace or to external training courses run in company time. These companies generally employed a skilled or semi-skilled male workforce and there was a perception that these employees needed more encouragement to engage in lifelong learning. The training was driven by statutory training requirements or the need for a specific set of job-related technical skills and more broadly based formal qualifications were seen as having little value:

I am a great believer in on-the-job training because you are getting trained on exactly what you need to know. If you are at the college you'll get trained on things you'll probably never need to know if you are working in this environment. (Male Line Manager, Company A (copper cylinder manufacturer))

Managers of traditional medium-skilled firms recruited people from vocational educational routes and encouraged them to up-skill in order to carry out their job more effectively. Although employees sometimes felt that they were obliged to undertake particular courses, and so embarked on them somewhat grudgingly, they often became enthused once the training had commenced, recognising the value of having a wider understanding of their work.

Tensions around the benefits of lifelong learning to the individual and to the company appeared to exist in all organisations. For instance, Company C (oil exploration) was an example of a knowledge-intensive firm that emphasised innovation and offered employees access to formal qualifications, planned off-the-job study and gradual transition to become full members of the community. The company was willing to provide employees with company specific knowledge and had the finances to fund formal high level qualifications such as professional accountancy exams and MBAs. However, a director expressed doubts about the unalloyed benefits of lifelong learning, maintaining that HR departments needed to be tightly managed:

Management need to keep a grip on the HR department because if they have 50 ways of doing something, by the end of the following week they'll have another 100 initiatives they'd like to add to the package, and in the end you have to keep good budgetary control, otherwise you'll find that the organisation spawns initiatives that are leading the company in a direction that isn't supporting the main objectives. (Male Company Director, Company C (oil exploration)).

According to this director, the ideal in his company was to hire people with the right qualifications and skills mix who, with a small amount of targeted training, could immediately contribute to company profitability. Tensions of this type were also evident in the archaeology firm, where employees were keen to undertake a range of Masters level programmes to enhance their technical and professional understanding, but had been told that there would be no support from the company for such activities. Rather, the company director wanted them to undertake SVQs in business and management, which the employees regarded as having limited value and interest. Whereas the Scottish Government (2007) tends to view lifelong learning as inherently beneficial to the individual and the organisation, companies such as this are clearly balancing the costs and benefits, and are more concerned with the firm's well-being rather than the individual's career progression.

Summary and conclusion

In many ways, the case study companies presented above exemplify the trends emerging from the large surveys of participation in lifelong learning presented earlier. Employees with higher level qualifications are much more likely to be participating in training, often driven by the requirements of professional bodies in relation to registration with the professional regulatory body. The need for specific qualifications in less skilled areas of work, such as social care, has been driven by bodies such as the Scottish Commission for the Regulation of Care, however none of our case studies was in this particular sector. In less knowledge intensive organisations, there are fewer requirements for employees to gain accreditation in order to undertake a particular type of work, and therefore it is unsurprising that opportunities are more limited.

All of the companies in this study had, at least to some extent, an expansive approach to training, in that some employees were gaining formal qualifications with the firm's support and informal learning in the workplace was being facilitated. In all firms, employers were broadly supportive of employee development, recognising this as essential to the firm's health. However, unsurprisingly, they placed a greater priority on the financial and operation needs of the business, rather than the employee's future development. There was a marked contrast in approaches to lifelong learning amongst employees in knowledge intensive organisations compared with traditional manufacturing and training organisations. In the former, employees tended to identify their own professional development needs and pursue these, often in their own time, because of future career benefits and the requirements of professional regulatory bodies. The formal learning of less skilled employees in traditional firms tended to be more heavily directed by their employers and, at lower levels, was supported by government schemes such as Modern Apprenticeships. Formal learning took place in company time, and was geared towards the acquisition of essential skills required for the job in hand, rather than broader career development.

As we noted earlier, the Scottish Government has set out a bold agenda for workforce development and, in particular, for stimulating employer demand for highly qualified employees. However, it was clear from our study of both knowledge intensive and more traditional enterprises that company managers still nurtured some degree of scepticism about lifelong learning. Even in the organisations which prided themselves on their flexibility and innovation, the preference was to recruit people with the necessary skills and qualifications already in place, so that they could immediately contribute to the firm's profitability without further distraction. Employees in these firms were clearly undertaking further qualifications, but this was driven by their personal interest and ambition, rather than encouragement from their employer. In more traditional manufacturing firms, employers recognised that they were likely to have to train up their staff, but again the focus was on allowing people to gain the skills to do particular tasks, rather than a more expansive view of learning. Future economic policies on lifelong learning, particularly during the present period of recession, need to take into account the barriers to which clearly continue to exist.

Table 1

	Company A: Manufacturing (copper) company	Company B: Manufacturer (refrigeration) company	Company C: Oil and gas exploiter	Company D: Architect	Company E: Archaeologist	Company F: adult vocational training provider
Nature of the Enterprise:	Producer of hot water copper cylinders	Producer of large-scale refrigeration	Exploration and exploitation of gas and oil	Commercial architect firm	Commercial archaeologist firm	Commercial training provider - in the construction industry
Number of Employees 2008:	35 (90 % male, 65% blue collar and 35% white collar workers.)	250 (85% male, 50% blue collar and 50% white collar workers.)	70 (50% male, 100% white collar workers.)	30 (50% male, 100% white collar workers.)	50 (50% male, 100% white collar workers.)	10 (90% male, 65% blue collar and 35% white collar workers.)
Interviews with management:	2	1	3	2	2	2
Employee 1-position	Welder	Senior control systems engineer	Account Statutory Reporter	Qualified Architect	Post-excavation Divisional Manager	Training provider
Nature of the course undertaken	Modern Apprenticeship (ISCED level 5a). Provided by a Further Education College. Funding for course obtained through the enterprise and public funding.	Distance course: Microsoft Certified Developer (ISCED level 5a). Provided by a private training institution. Funded by the enterprise.	ACCA (Association of Chartered Certified Accounts, ISCED level 5a). Provided by a private training provider. Funded by the enterprise.	Professional Examination in Architecture (APEAS, ISCED level 5a). Provided by a University. Funded by the enterprise.	SVQ 4 (Management, ISCED level 5b). Provided by a private training provider. Funded by the enterprise.	Health and Safety (ISCED level 5a). Provided by a Further Education college. Funded by the enterprise.
Employee 2-position	Welder	Mechanical fitter	Commercial analyst		Senior Manager	Training provider
Nature of the course provided:	SVQ 3 (Welding and Fabrication, ISCED level 3c). Provided by a Further Education college. Funded by the enterprise.	Engineering Management (ISCED 5a). Provided by a Further Education College. Funded by the enterprise.	MBA (Master of Business Administration, ISCED level 5a). Provided by a University. Funded by the enterprise.		SVQ 4 (Management, ISCED level 5b). Provided by a private training provider. Funded by the enterprise.	NVQ 3 (City and Guild qualification in Occupational Health and Safety, ISCED level 3a). Provided by a Further Education College. Funded by the enterprise.
Employee 3-position					Archaeological consultant	
Nature of the course undertaken:					SVQ 4 (Management, ISCED level 5b). Provided by a private training provider. Funded by the enterprise.	

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