

The Delivery of IT Skills: A Tale of Two Countries

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ABSTRACT

Many reports have confirmed that the UK is in danger of falling behind other industrialised countries in terms of economic growth. Finegold (1993) for example, talks of the low skill-low wage equilibrium facing the British workforce. More specifically, given important developments in technology in the last two decades (Storey, 1992), it is clearly of paramount importance to ensure that a workforce has the necessary IT skills to enable workers to do their job efficiently and benefit in terms of a higher standard of living.

However, as long ago as 1962 the American economist Becker pointed out that there is a key issue here in terms of who pays for extra units of training. General skills will, said Becker, be paid for by the employee; meanwhile, the firm and the employee will pay for firm specific skills.

Given this background, this paper examines the role of IT training given to library staff in two countries (UK and Finland). The data presented here is by way of an interim report, representing the first batch of results in a three year comparative study. In both cases, the role associated with the relevant trade unions is examined.

INTRODUCTION

An important part of the background to this study concerns the many reports that have confirmed the vital role attached to education and training as a source of economic growth (*Economist*, 1992; Netherlands Research Centre for Education and the Labour Market, 1995). Many of these reports have also confirmed that the UK is in danger of falling behind other industrialised countries. Finegold (1993) for example, talks of the low skill-low wage equilibrium facing the British workforce. More specifically, given important developments in technology in the last two decades (Storey, 1992), it is clearly of paramount importance to ensure that a workforce has the necessary IT (information technology)

skills to enable workers to do their job efficiently.

In addition, there has been a lot of discussion in the past two decades or so, in a number of countries, describing the advantages that computers can bring to the business of searching for information and the learning process (Hommes et al., 1999). Some authors (e.g. Fourie and Bischoff, 1999) would even argue that a complete revolution is about to occur, in terms of the way that people learn. Institutionally this has been reflected in the merger of previously disparate departments; in our own university, for example, we now have a combined library and computer services department. Many local governments (including the one in this study) have merged their education and library departments. Similarly, in Finland, it appears that the courses in Departments of Information Studies have been merged very closely with IT provision (Tikkanen, 1999). In particular, the UK government has stressed how flexible learning can be, thanks to the development of computer technology (Department for Employment, 1992). Much of the British management literature as well as that coming from trade unions has echoed the optimistic tone of the government literature (Confederation of British Industry, 1993; Unison, 1992).

At the same time, the UK government has realised that a major training initiative is needed if relevant staff in libraries are to take advantage of IT developments in the 1990s and help their readers to take advantage of facilities such as the Internet (see *Building the New Library Network*, Library and Information Commission, 1998). This initiative is surprising in that the amounts of central government funding are huge (in the order of £400 per member of staff per year) and at odds with much of the discussion of UK policy in the past two decades, which has stressed the role of private funding with respect to education and training (see, for example, Walker and Lincoln, 1992). Moreover, as

Greenhalgh and Mavrota (1994) suggest, there has been a general swing away from policies suggesting that employers should pay for training in the 1960s, towards an alternative strategy that has emphasised the role that individuals should take in terms of paying for their own development in the 1990s. In effect, the government (in this country) seem to be suggesting that the case for IT training in libraries is so important that it is to be treated as a special case and as such, has commanded considerable support (and funding) from various departments, ranging from the Department for Trade and Industry's IT for All programme, to the National Grid for Learning and the University for Industry (Batt, 1999).

The policy context for this paper comes from the tension described above; we wished to see how well programmes to inform (and update) library staff were progressing, given this backdrop. A more general context for the paper comes from the economics literature on labour markets. There has been a well-established consensus that the UK has been one of the most deregulated of the European labour markets in the past two decades (Rhodes, 1992; Finegold, 1993). Furthermore, within the UK there is a growing concern regarding the risk of social exclusion, by the least qualified members of the workforce (Department for Education and Employment, 1999). Meanwhile, the irony is that in the private sector, training seems to be regarded with renewed importance. Even in the recession of the early 1990s, firms did not cut back spending on this activity, which is often said (in textbooks such as Torrington and Hall's, 1995) to be one of the first casualties of such a climate (Saggers, 1994; King, 1993). However, the voluntarist stance of UK employers in the past two decades has meant that there has not been a mandate to train staff, comparable with the levy system that operates in France, or the German workers' right to access vocational training. Even employers' representatives (such as the CBI, 1994) accept that this may well mean that temporary and part time staff are denied access to training. Although other European workforces had witnessed an increase in the number of atypical employees (i.e. those not permanent and full-time) in the 1980s, as Rodgers (1989) *inter alia* has pointed out, the trend seems to be particularly pronounced in the UK. The danger is that employers will only invest training

resources in core employees and that a growing band of peripheral employees are given little, if any, training and that what training they do receive is firm specific, rather than general (Atkinson, 1984).

In other words, even if the government did recognise the need for training in the case of library workers, there was a possibility that institutional factors might prevent a wide cross section of staff from benefiting as much as they might do, from a special initiative. Such factors may have meant that relatively few of the potential benefits of improved technology because large numbers of staff did not receive adequate training. We wished to see if there were differences between typical and atypical workers, in the context of IT training for library workers.

Another strand of the relevant literature comes from Becker's (1962) distinction between firm specific and general training. Strictly speaking, general training raises productivity equally across a number of employers, whilst firm specific training is only of interest to the host employer (in that it only raises productivity in that organisation). In practice, of course, Becker recognised that much training was likely to be partly general and partly firm specific. Nevertheless, the distinction is a useful one and has important implications, in terms of who pays for the training. Becker's argument was that generally trained employees would pay an imputed cost for that training because they would receive a lower wage than would otherwise be the case. By contrast, he was slightly more ambivalent about the way that firm specific training would be paid for, as Chapman (1993) points out. Becker suggested that both employer and employee would pay for firm specific training; the proportion borne by each would depend on the state of the labour market (i.e. the extent of labour turnover). An extreme case would assume that the labour market was hostile to the employer (i.e. that labour turnover rates were high); in this situation, firms would pay for all of the costs of firm specific training during the training period. However, in the post-training period, firms would pay employees a wage that was less than their VMP (the value of their marginal product). For their part, employees would tolerate this situation because they would know that their wage (post training) would be higher than if they had received

no training at all. In this way, both employers and employees would share the cost of firm specific training. We wished to see how general the IT training was, that librarians received and who paid for it (either directly or indirectly).

Finally we wished to see what role, if any trade unions had in the provision of training. A number of authors (Mahnkopf, 1992; Wright and Spaven, 1996) have argued that British trade unions are not, generally, involved in the provision of training and we wished to examine the case here.

METHODOLOGY

It is increasingly true that research (including research into education/training provision) is being done on an international basis and such comparisons can often yield interesting results (Shackleton et al, 1995). Equally, there are several obvious problems with such research, not the least of which is related to basic difficulties resulting from the use of different languages. As Williams (1992) points out, the differences between education/training systems are deep-rooted and make comparisons difficult. Even comparing something such as a university degree across countries can be difficult, given that the time span taken to do such a qualification varies enormously. Bearing such difficulties in mind, we wished to compare our results with those of another country and Finland was chosen for a number of reasons. Firstly, we at the University of Central Lancashire have well-established institutional links in place with Finnish universities and polytechnics. Secondly, we felt that Finland would provide an interesting comparator, given that the standard comparisons between the UK and Germany or Japan, have already been well rehearsed in the literature (see Deissinger, 1997, and Needle, 1994).

Finland is an interesting comparator in that there are some significant similarities between the countries; for example, both are in the EC and have approximately the same landmass. (Finland's is 338,144 square kilometres, compared to the UK's which is 241,752 square kilometres.) There are, of course, significant differences between the two countries. In this context the fact that Finland has 5.099 million inhabitants, compared to the UK's 59.395 million is important (Readers' Digest, 1997). This spatial difference per capita, coupled with a significant

difference in the standard of living might have led one to the conclusion, that Finland would be significantly ahead of the UK in terms of the take-up and development of flexible learning. (The average income per capita in Finland was \$22,851 in 1997, compared to \$21,683 in the UK, according to the Confederation of Finnish Industry and Employers, 1997). Moreover, Finland provides an example of an economy whose government has not adopted the same attitude towards deregulating its labour market during the past two decades, as was the case in Britain (Julkenen and Malmberg-Heimonen, 1998). Again, we wished to see what difference and similarities there were, comparing the two cohorts (both from a library background), faced with a similar set of problems. The fact is that in both cases, here have been significant improvements in the development of computer technology in the last decade and these improvements have impacted on the library service offered to "consumers" (borrowers). The common problem that both countries have is in terms of making sure that all of the relevant staff have access to adequate training.

To investigate these issues, it was felt useful to track 20 employees from each country, over a period of three years; we wished to "get inside" the libraries of each country and track specific employees working in town/polytechnic libraries. Logistically, this was felt to be possible (albeit difficult) and likely to yield interesting results. This paper is by way of an interim set of results, after the first round of interviews with each cohort (held in the winter of 1999/2000). We will follow these employees during a longitudinal study over the next two years, to gain some impression of the way that IT training impacts on the chances of getting work in another organisation, or alter employees' prospects of gaining promotion, with the same employer.

The UK was represented by a county library service, featuring the main HQ branch, as well as several smaller branches, scattered over an urban area in the north-west of England. The Finnish group, who were from the eastern side of the country, comprised a mixture of librarians; most (15/20) were from a local town library and the rest were from a polytechnic library. The replies to questions were aggregated and confidentiality guaranteed. Each member of staff was interviewed *in situ* for 20-30 minutes.

THE BRITISH RESULTS

In the UK group, everyone had done some form of IT training in the year preceding the interview. This reflected the concern that the government has felt, with respect to training library staff (Batt, 1999; LIC, 1998); special funds had been available for this training. However, one could draw a clear distinction between the general (accredited) training on offer and other training that was somewhat narrower (firm specific, in Becker's 1962 terminology). Of 10 full time staff interviewed, 6 had done generally accredited courses, as well as the narrower vocational courses on offer. By contrast, only a minority (3) of the 10 part time staff had done general courses. In particular, these staff (both full and part time) had all done (or were about to do) a two-day course (in employer's time) on TALLIS, which is a computer cataloguing system. The only exceptions to this rule were the two full time HQ staff, who were purely concerned with administration. The intention was that the whole county system would go online with its cataloguing in the next few months and hence the need for training of this sort.

It is worth saying something about the general courses that were followed. Only one member of the part time staff had enrolled for the ECDL (European Computing Driving Licence); another two had enrolled for a course run under the auspices of the Royal Society for Arts, called CLAIT (Computer Literacy and Information Technology). One of these two part time members of staff had also started an integrated business course, which was also certificated by the RSA. Broadly speaking, one could regard the CLAIT course as being fairly introductory; the integrated business courses was more difficult/comprehensive and the ECDL course was even more demanding (and complex). Whereas the employer was prepared to pay for the direct costs of such training (e.g. buying software), they were not prepared to allow time off to do these more general courses. This proved to be significant, in that the ECDL was estimated to have taken 150 hours to complete, the integrated business course was estimated to take 120 hours and the CLAIT course typically took about 40 hours to complete. (A nominal amount of 3 hours per month was allowed, by the employer, for studying the ECDL.) Of the full time staff, 4 had studied

the CLAIT course but had gone no further; another one had started to study the ECDL, having graduated from the CLAIT course and another employee had started ECDL, without doing CLAIT. Perhaps these results can be explained as Adnett (1989) suggests in that attachment by some workers to the labour market (such as part time staff) is lower than that experienced by other groups (such as full time workers). It could be that full time staff felt that it was worthwhile using their own time to study, because the potential rewards (of a monetary or non-monetary nature) were higher, than those facing part time workers.

If one looks at the 9 people doing generally accredited courses, then another interesting result emerges. Only 3/9 of these staff felt that the prime benefit of such training took the form of improved job prospects, either with their existing employer or elsewhere. Moreover, one has to remember that more employees had done non-accredited training (11/20) than had done general courses (9/20). To sum up, only a minority of staff had received general training and only three of these felt that such training had affected their job prospects. In that sense, these results are consistent with Shackleton (1992) who argues that poaching (of trained employees) is more of a potential than actual threat and does not, in reality, dissuade British employers from providing training.

One way to judge the efficiency of education/training provision is to look at attrition rates (Hanuschek, 1992). None of the 11 employees doing firm specific courses were aware of any dropouts from these short courses (they typically lasted two days). More surprisingly, drop out rates from accredited (such as the CLAIT mentioned above) were also low. These employees had to do such courses either by distance education (in 6 cases) or by evening class (in another three cases). So far, there were no known instances of attrition from the distance education courses, which is surprising given that they were done in employees' own time. The drop out that did occur was from evening class courses. There were two cohorts for the CLAIT evening class and drop out rates amounted to one per cohort (i.e. 1/12 and 1/15). Similarly, the drop out rate from the integrated business course (held in the evening) was 3/12, over the course of a year. What remains to be seen is

whether the drop out rates for the three people doing the ECDL (by distance education) will remain low.

Mahnkopf (1992) draws a clear distinction between trade union involvement in training in the UK, compared to Germany. The traditional approach in Britain has been for unions not to get involved in the provision of training; indeed, Spaven and Wright (1996) argue that managers can be openly hostile to such a possibility. Our research was consistent with these authors in that although all except one of the employees was in the relevant trade union (Unison, which is the biggest UK white-collar union), this union did not involve itself in the design of IT courses for this cohort. However, it did enable the three employees mentioned earlier to do the CLAIT course via evening class, in that the union paid for the tuition fees concerned. A management problem here was that their training budget was constrained, relative to the demand for courses such as CLAIT; in effect, a queue had developed. The union involvement meant that a greater number of employees were able to access this training, within a given time period, than would otherwise have been the case. These results are also consistent with Arumpalam and Booth (1998) who estimate that being in a trade union increases the chance of getting training by between 7% (for men) and 10% (for women).

A fifth result concerns ownership of a computer. The possibility of doing distance learning courses has already been mentioned. One (part time) member of staff commented that doing such courses without ones' own computer was difficult; the process became far easier once she had her own computer at home. In fact a significant minority (7/20) of the British staff did not have their own computer and perhaps not surprisingly, none of them did a course via distance learning. Conversely, all 6 of those doing any form of distance training courses did have their own computer. This finding is also consistent with the Dearing Report (1997) into higher education that recommended that all students at university in the UK should have their own computer.

THE FINNISH RESULTS

All except one of the 20 staff interviewed had also received some form of IT training in the year

prior to the interview. The exception was a temporary employee who had recently graduated (October 1998) in Library and Information Systems; arguably, her degree had equipped her with a high level of computer literacy anyway. Like the British government in the 1990s, the Finnish government has been prepared to set aside specific funds for IT in libraries and related training (such as the House of Knowledge project, funded by the Ministry of Education). Mostly, people received purely non-accredited training (in 14/20 cases). Of the 6 people receiving accredited training, the majority (4/6) had received some form of distance education as part of the course. By contrast, the non-accredited training was purely delivered on a face to face basis. The employers were prepared (in all 6 cases) to help with the direct costs of accredited training, in that they were prepared to pay for tuition costs.

Where staff had done accredited training, it was accredited by an academic institution. For two of these 6 people there was also an overlap with the Personal Development (PD) programme for professional librarians. (To put the following into some perspective, it is worth knowing that in Finland, a degree is generally 140 credits.) Two of those interviewed had done 20 credit courses accredited by Oulu University. Another employee had done a 40 credit course accredited by Tampere University; this employee had also done this (major) course under the auspices of the National Centre for Professional Development in Education. A fourth person had done two accredited courses; one was a 35 credit unit accredited by Oulu University and she had also done a separate 40 credit programme under the Personal Development programme. A fifth employee had done a 5 credit course certified by Oulu University. The sixth person to do accredited training had done a vocational course run by Kajaani Institute (akin to the British system of the Workers' Education Association). There was no evidence of the myriad of autonomous bodies willing and able to accredit vocational training found in Britain (Bennett et al, 1992).

Attrition rates were generally low. Just as in Britain, none of the people doing non-accredited training were aware of any attrition from short courses, lasting one or two days, that covered topics like the Internet, or a basic introduction to Word for Windows. As might be expected, the attrition that did occur was from the longer

accredited courses. Even here, drop out rates were low; in 3/6 cases respondents said that drop out rates were zero. Of the other 3 people doing accredited courses, one said that on her course, there was a drop out of 1/20 participants. A second employee said that attrition amounted to 6/17 participants on her course; a third person said that attrition rates were 5/15 on her course. These drop out rates (of a third or less) are impressively low when one realises the amount of the employees' own time involved. In the first case cited above, the employees were devoting every other weekend (for one year) to the course; in the second instance, it was one evening a week for 18 months and in the third case, one day per week, over a period of two and a half years.

These levels of commitment are interesting and were often higher than those demonstrated by the British staff prepared to do accredited training in their time. In Britain, the most common accredited course (CLAIT) took approximately 40 hours to complete and only 3 staff had so far started the ECDL (estimated to take 150 hours). On the other hand, the willingness to do accredited training in the employees' own time was more widespread (9/20 employees) compared to the Finnish case (6/20). In terms of our National Vocational Qualification (NVQ) programme, 5/6 of the Finnish people doing accredited courses were doing them at level four equivalence (i.e. degree level) and the sixth was doing a level 3 course (equivalent to our A level, matriculation examinations). All of the accredited training in the UK was at NVQ level 2.

Like their British counterparts, the Finnish librarians were very unlikely to be poached, as a result of their training. Only 3/19 receiving training said that a major benefit would be improved prospects of promotion; in all of these cases, employees were doing generally accredited training. In most cases (14/19) the biggest benefit of training (whether accredited or not) was perceived to be the increased confidence that people felt, at their workplace.

One important distinction did emerge between the Finnish and British cases, in that all of the library employees in Finland were women who worked full-time. This contrasts with the British situation in that 3/20 of the staff interviewed were men and 10/20 were part-time (and all of the latter were women). This reflects a pattern identified by Rodgers (1989) who says that the move

towards the use of atypical employees is common throughout Europe but is most pronounced in Britain. Almost all (90%) of part-time work in Britain is done by women and part-timers account for a quarter of the workforce in that country.

Union density was high; 19/20 of the staff interviewed were in a trade union. This finding can be partly explained by the fact that in Finland, unemployment benefit increases by approximately 40% if workers are in a trade union. The one exception was something of an anomaly in that this employee was not a fully paid-up member; she did not, for example, have access to the full range of union benefits (such as training provided or legal help). However, she was able to claim the extra unemployment benefit (should that need arise). There were three unions involved; KTV (9/20); AKAVA (7/20) and KVL (3/20). Both KTV and KVL serve local government blue and white collar workers, whilst AKAVA membership derives from university-educated professional staff working in educational institutions. None of the unions had been involved in negotiating the provision of IT training at work (in terms of quantity or quality) and none of the staff had received financial help (from their union) to go on IT courses.

Finally, in terms of home ownership, an interesting result occurred in that 9/20 of the staff interviewed did not have their own computer, which seems surprisingly high. Like the British case, though, it emerged that the majority (3/4) of those that had done any form of distance learning had their own computer. Also, even though 9 people did not have their own computers, there was no sign that the Finnish staff concerned needed to go on the sort of very basic (introductory) course that were often taken (in 7/20 cases) by the British staff (the so-called IT for the Terrified course).

CONCLUSIONS AND POLICY IMPLICATIONS

One clearly has to be very wary of drawing policy conclusions from such a small data set and one that suffers from the obvious defect that respondents are not responsible for the answers given. Also, of course, one has to recognise the importance of cultural variables; what policies work in one country may not be as efficient in

another (Hofstede, 1991). A final caveat is that arguably, the differences between the two countries are as important as their similarities, with respect to the way in which IT training has been delivered to librarians. Nevertheless, the provision of relevant IT training is clearly an important issue and five policy implications are tentatively offered at this stage. The first point is that employers concerned with IT training do not have to concern themselves with the with the risk of poaching in the vocational fields discussed here; such a risk should not inhibit the provision of training. In particular, short (i.e. 2/3 day) firm specific courses are unlikely to open up the possibility that employees will be poached within an occupational labour market in that they do not envisage that their training will encourage them to broaden their range of job applications. Of course, we will be monitoring the employment histories of the relevant staff, but at this stage it does not appear as though either set of librarians were doing either accredited or non-accredited training as a means of sending out signals in the appropriate labour markets (to the effect that they were more employable elsewhere).

Secondly, if policy makers are serious in their intention to provide distance education for librarians, then it may well be provident to spend some funds on mobile (laptop) computers, in order to ensure that such employees have access to a computer at home. Employees could borrow such computers when (and as) they needed them to work on, at home. Certainly, it is the case that both governments are already spending huge sums of money to ensure that relevant funds are available for the express purpose of training library staff in IT. As long ago as 1992, the *Economist* pointed out that governments around the world are engaged in a global race, in that they want to make sure that their workforces are adequately trained to perform high value-added work; it is too dangerous to assume that employers and employees will always provide adequate training (without central government intervention), as implied by Becker's work (1962).

Librarianship is an occupation that attracts a large number of female workers in both of the countries featured in this study. All of the Finnish librarians were women. Similarly, all except three of the 20 British employees were women but 10/17 of these female workers were part time. In order to keep up with developments in technology,

it is vital that such part time workers are given sufficient training. Even the CBI (1994) admits that in general terms, atypical workers do not gain adequate access to training. In this particular vocational field, it is reassuring to see that part time workers do receive training. It will be interesting to see if public funding (i.e. from central government funds) continues to support IT training for library staff in both countries. In particular, it will be interesting to monitor the situation in the UK, given that the LIC's intention is that every member of the library staff should do the ECDL (LIC, 1999).

Fourthly, our results suggest that trade union involvement does not inhibit training; quite the opposite. Indeed, as Mahnkopf (1992) suggests, it may well be that countries such as the UK would do well to look at the possibility that training becomes contestable terrain, i.e. area over which employers and trade unions negotiate, in order to improve the skills of their members. A similar point could be made in Finland, where it appears that the trade unions concerned do not negotiate over training.

Finally, the emphasis given to lifelong learning is clearly critical in this context. One criticism of the UK is that we do not have a culture that promotes andragogy, whereby employees take responsibility for the constant updating of their skills (Finegold, 1993). It will be interesting to see if various policies designed to promote lifelong learning in the UK do come to fruition (LIC, 1998; Dearing, 1997) and help to spread the development of IT training. In this context, the role of the NVQ system (as a means of accrediting and furthering lifelong learning) is interesting. As Shackleton and Walsh (1995) argue, other countries such as New Zealand and Australia have expressed an interest in a scheme that is designed to accredit training wherever it occurs; the problem is that, as yet, take-up rates have remained low. In this study, none of the British employees were aiming directly for an NVQ qualification. By contrast, in Finland where accreditation was dominated by academic institutions, there was some evidence that the Personal Development programme for librarians had provided an alternative framework, within which a persons' skills could be updated, in an accredited fashion. It could be that governments need to devise alternative accreditation schemes as part of a plan to enhance IT skill-acquisition.

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