

GEN Consulting were commissioned by Sector Skills Alliance Scotland to appraise the project research in to the value of workplace learning, skills and qualifications as provided by Futureskills Scotland and external consultants. Additionally GEN Consulting were to consider Scotland's record on workplace learning in an international context.



Key examples of skills, qualifications and training improving business performance are outlined below and explained in more detail in the text on the following pages:

- High training industries exhibited a range of characteristics including greater productivity, higher wages, higher capital intensity, more R&D, higher qualified employees and longer job tenure
- A study found connections between training and higher value added output, profits and wages across a number of sectors
- In both services and manufacturing the evidence shows that growing firms and innovators spend more on training than stable/declining firms, non innovators and small firms
- Firms with Investors In People status experienced superior performance relative to those without in terms of growth of export performance, return on sales, growth in net worth, return on capital, return on assets, remuneration levels, increases in sales per employee, rate of increase in sales per employee and rates of return on human capital per employee
- Training was viewed positively in one study, with half the firms surveyed stating that training had increased their turnover and profit margins
- Firms with staff who had an extra year of education raised manufacturing productivity by between 5-8% and by between 6-12% in the service sector
- Top performers in the manufacturing sector hired workers with, on average, an extra level compared to the lower performers

- Training was found to have a positive impact on wages and productivity. The benefits to productivity were twice as great as the increase in wages. Overall, the firm produces more, the employee earns more and the economy grows faster

These points all suggest a positive association between skills and business performance. To maximise the return on investment in skills it is important that firms base their decisions about skills in a wider, organisational context. This should consider how the firm will use new skills gained, including the ability of managers, job design and any associated capital spending.

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1. INTRODUCTION

1.1 Introduction

GEN Consulting were commissioned by Sector Skills Alliance Scotland (SSAScot) to carry out an assessment of research on workplace learning and Scotland's international positioning in workplace learning, skills and qualifications. This was to provide an advocacy document on the benefits of workplace learning.

The aim of the Promoting Workplace Learning project is to create an interactive DVD, including a workplace training evaluation tool to raise employer awareness, for the first time, of business benefits that workplace learning can provide for organisations, regardless of size, sector or location.

The project will significantly raise the awareness of employers to the business and workforce development benefits of investing in workplace learning.

1.2 Assessment of research and international positioning – key aims

The aims and objectives of the study were to:

- Assess all the research outcomes and prioritise key points so that the project delivers the messages in the most appropriate and advantageous manner
- Assess how the research fits with similar UK based research
- Set the research against the context of international workplace learning – how does Scotland compare?

1.3 Methodology

The methodology for the study included:

- An appraisal of the Futureskills Scotland evidence submission and the External Consultants report on workplace learning
- A desk based review of key research on the benefits of skills, qualifications and workplace learning to businesses
- A desk based review of available statistics on Scotland's international position on workplace learning, qualifications and skills as well as the international positioning of Sector Skills Councils (SSCs).

1.4 Report Structure

The structure of the report is as follows:

- Chapter 2 looks at the key messages from the appraisal of the research on workplace learning
- Chapter 3 looks at wider research on the benefits of workplace learning, skills and qualifications
- Chapter 4 looks at Scotland's international position in workplace learning and the positioning of SSCs in a wider context
- Chapter 5 draws some conclusions from the evidence presented.

2. ASSESSMENT OF RESEARCH

2.1 Introduction

This chapter examines the appraisal of the research on workplace learning carried out by Futureskills Scotland and External Consultants as part of the Promoting Workplace Learning project and covers the following topics:

- Background to the research
- Key findings
- Supporting evidence for the Promoting Workplace Learning Project.

2.2 Background to the research

The two pieces of research were produced to provide evidence to support the development of the Promoting Workplace Learning Project.

The Futureskills Scotland work tested the following assumptions:

- Is there insufficient training?
- Is much training wasted?

- In more training needed to raise productivity?
- Can employers be persuaded that training pays?

The research commissioned from external consultants covered:

- The range of methods and delivery tools used in the provision of workplace learning opportunities
- The range of 'soft' skills being delivered and the selected delivery method
- Where workplace learning is provided/offered, whether employers relate the learning to National Occupational Standards (NOS)
- The proportion of in house workplace learning being delivered by trained and qualified trainers
- Whether employers measure return on investment (ROI) and in what fashion
- How public stakeholders currently measure the impact of workplace learning and return on investment.

2.3 Key findings

The key findings from the Futureskills Scotland research report were:

- International data shows that Scotland compares favourably with other countries in the proportion of people in work who receive training
 - On a range of measures the quality of Scotland's workforce compares favourably with that in peer group economies
 - Between 80% and 90% of employers are satisfied with the training supplied by FE Colleges and Private Providers
 - Research published in 2004 argues that exhorting employers to train will not make a difference
 - On most indicators there are marked differences between and within sectors.
- The research commissioned from external consultants made the following conclusions:
- There is a general consensus in the field that investments in the workforce yields improvements in the performance of organisations
 - All large organisations and 88% of small and medium enterprises (SMEs) use formal workplace learning
 - All large organisations and 90% of SMEs use workplace learning tools
 - When employers are asked if they deliver informal workplace learning, and are given explicit examples, they will mostly answer in the positive
 - There is less of a difference between informal workplace learning in SMEs than large organisations compared with off the job learning (where large organisations are much more likely to carry out more)
 - The main method used to teach staff about soft skills is an informal method – taking staff through tasks
 - Fewer than 50% of organisations in the survey stated that they used soft skills training – despite being cited as the main weakness in staff by employers (this could be because they are difficult to assess, evaluate and certify)

- Large companies are more likely to use the National Occupational Standards for their sector than SMEs
- A significantly higher percentage of large companies offer national qualifications than SMEs
- The Kirkpatrick evaluation model is the most commonly used to assess learning. This covers:
 - *Reaction* (of participants to training)
 - *Learning* (gains in skills or knowledge)
 - *Behaviour* (Whether skills/knowledge are applied or practiced)
 - *Results* (ultimate outcomes)
 - *Return on Investment* - added by Phillips (benefits divided by the cost of training)
- Interviews with employers discovered that larger employers have in house formal systems for evaluation but that smaller employers do undertake significant amounts of informal evaluation (though it may not be recorded) as well
- 90% of survey respondents recorded some use of formal evaluation methods
- Staff reviews are the most common and effective workplace learning evaluation method

- The practice of informal workplace learning evaluation is even more widespread than formal evaluation – with observation being the main method (and most effective)
- It is crucial that the impact of learning is isolated from the gains in revenue, performance or productivity that might have accrued because of outside circumstances
- 91% of survey respondents did not measure the return on investment.

2.4 Supporting evidence for the Promoting Workplace Learning project

The two pieces of work both provide some strong evidence that supports the development of the Promoting Workplace Learning project. GEN Consulting draw these out and develop some of these arguments further.

Key findings from the Futureskills Scotland work that supports the need for the Promoting Workplace Learning project were:

- Establishments employing fewer than 5 people are much less likely than others to train their staff (and

these organisations dominate Scotland's business base)

- People working in them are also less likely to receive training than those in larger workplaces
- Growing businesses are much more likely than other firms to have hard to fill vacancies (and are more likely to train their staff)
- Skills gaps (that is where employees are assessed as being not fully proficient at their job) arise disproportionately among people in jobs that typically need lower levels of skills
- People in lower skilled jobs are less likely to be trained.

The work produced by external consultants highlights the following messages that supports the need for the Promoting Workplace Learning project:

- Of SMEs, 39% have a training function and 46% have a HR function indicating that the majority of SMEs have no such provision
- Informal workplace learning is very common – but there is a need for companies to look at how they measure the impacts of the training

- 73% of all formal workplace training is induction. While induction training can be a valuable part of staff development it is wider soft skills that employers have tended to state as being lacking in staff. This suggests that the balance of training may not be targeted at the areas that really need them. This also has the effect of making firms with high staff turnover look like high training organisations
- Use of DVDs (either internally or externally) is not common as a means of training – this should mean that the Promoting Workplace Learning DVD will be a high additionality scheme.

3. WIDER RESEARCH ON WORKPLACE LEARNING

3.1 Introduction

This section draws on findings from a review of the wider research literature on the benefits of workplace learning, training and qualifications amongst the workforce. It is structured around the following headings:

- Rationale for a skills approach
- Benefits of skills for businesses.

3.2 Rationale for a skills approach

The main rationale for improving skills in the UK is to build an economy that can both increase productivity and grow the total number of jobs.

Skills are one of five key drivers believed to increase productivity¹. The four others are:

- Innovation
- Enterprise

- Competition
- Investment.

The logic is that a skilled workforce is likely to be more productive and will allow firms to design, produce or deliver higher quality goods or services.

HM Treasury provide evidence on the benefits of a skilled workforce to the firm:

- Oulton (2000) finds that differences in physical and human capital can explain around 60% of the productivity gap with US businesses and almost all the gap with non US firms
- In both services and manufacturing the evidence shows that growing firms innovators and large firms spend more on training than stable/declining firms, non innovators and small firms.

More recent work released as part of the Leitch review of skills² suggested that skills can improve productivity:

¹ HM Treasury (2000) *Productivity in the UK, the evidence and the governments approach*. HM Treasury.

² Leitch.S (2005) *Skills in the UK, the Long Term Challenge, Interim Report*. HM Treasury.

- Directly by increasing human capital in a firm or country
- Indirectly by ‘spillover’ impacts on the productivity of other workers
- Via other drivers by encouraging greater investment and innovation.

Several studies were cited that provide evidence for these claims:

- One study showed a 10% rise in net sales per worker with over three years training
- Another study showed that efficiency of production increased with training in manufacturing
- Another study found that productivity is enhanced by the joint introduction of training and innovation. This suggests that having highly skilled workers can help firms to gain the full rewards of new investment because they are better able to adapt quickly and effectively to change.

3.3 Benefits of skills for businesses

There have been a number of studies that cite examples where training or skills brings bottom line benefits to business performance.

A review of the evidence on the rate of return to employers of investment in training and employer training measures³ cites a number of case studies where training or skilled staff have improved the business performance of firms.

Key facts from the case studies are outlined below:

- An extra year of education raised manufacturing productivity by between 4.9% and 8.5%, and in the service sector by between 5.9% and 12.7%
- Work on the competitiveness of the German and British kitchen furniture production sector showed that the German workforce was better qualified than the GB workers. As such the German firms were operating at the upper end of the product specification and quality range and were producing higher value products while UK firms were

³ Keep.E, Mayhew.K, and Corney.M (2002) *Review of the evidence on the rate of return to employers of investment in training and employer training measures*, Skope Research Paper, No 34

operating standardised lower value production processes

- Another study assessing the German and GB hotel sector workforce found that Germany was producing around twice as many trained staff as Britain each year. This in turn translated into higher productivity in Germany (150% of the norm in London hotels and 200% of British provincial hotels)
- A comparison of the Dutch and GB engineering workforce found that the Dutch plants had productivity levels higher than their British counterparts. This difference was accounted for in terms of machinery breakdowns and down time, and the ease with which new technology could be introduced. These differences in turn appeared to rest on the Dutch workforce with a higher proportion of craft trained workers and higher level technicians
- A study in 2000 found positive linkages between training and productivity across a range of sectors even after a range of controls were used. High training industries exhibited a range of characteristics including being more productive, paying higher wages, having higher capital

intensity, conducting more R&D and having a more qualified workforce with longer job tenure

- In terms of its impact on wages, training was found to have a positive impact, but the implied impact of training on wages was lower than its effect on productivity. In effect wages increased but productivity increased even more
- A study in 2000 comparing performance of firms with Investor in People (IIP) status over the period 1994 and 1998 found that firms with IIP experienced superior performance relative to those without it in terms of growth of export performance, return on sales, growth in net worth, return on capital, return on assets, remuneration levels, increases in sales per employee, rate of increase in sales per employee and rates of return on human capital per employee.

The evidence from these case studies is clear – training and high skill workforces can bring significant benefits to firms and those who work for them.

Research for the Sector Skills Development Agency (SSDA)⁴ reviewed the links between training and firm

⁴ Tampkin.P, Giles.L, Campbell.M, Hillage.J (2004) *Skills Pay: The Contribution of Skills to Business Success*. SSDA Research Report 5

performance. In general, the evidence suggests that training and workforce qualifications improve firm performance. Specific examples from the study include:

- A 2003 study found that the top performers in the manufacturing sector hired workers with, on average, an extra qualification level compared to the lower performers. The work also found that higher skill levels support innovation and more sophisticated production processes and were associated with the production of higher quality products
- A US study found that higher qualifications were related to improved access to finance and increasing probability of business survival
- An OECD study looked at innovation in UK SMEs and found that higher qualification levels of both managers and staff boosted innovation. Higher training expenditure per employee was also associated with higher technological complexity and originality
- A study looking at the impact of training on performance, for a variety of measures including value added output, profits and wages, for a group of British industries between 1983 and 1996 found

connections between higher training and higher labour productivity across a number of sectors

- A 2003 study looking at the impact of training on business performance found that training was viewed positively by business. Indeed, half the firms studied felt that training had increased their turnover and profits margins. Further, three quarters thought that it had improved their labour productivity.

The key issue is that despite the complexity of assessing the benefits of training there are a number of studies where training and qualifications are associated with improvements in the business performance of firms.

The key message then is that training and highly qualified staff bring benefits to individual firms, the staff who work for them and the wider economy.

4. WORKPLACE LEARNING IN AN INTERNATIONAL CONTEXT

4.1 Introduction

This section looks at Scotland’s international positioning on skills and qualifications and provides a range of charts showing Scotland position on some key skills, qualification and training measures.

4.2 Workplace learning in an international context

Chart 1: Proportion of 25-64 Year Olds with Low Qualifications, 2002

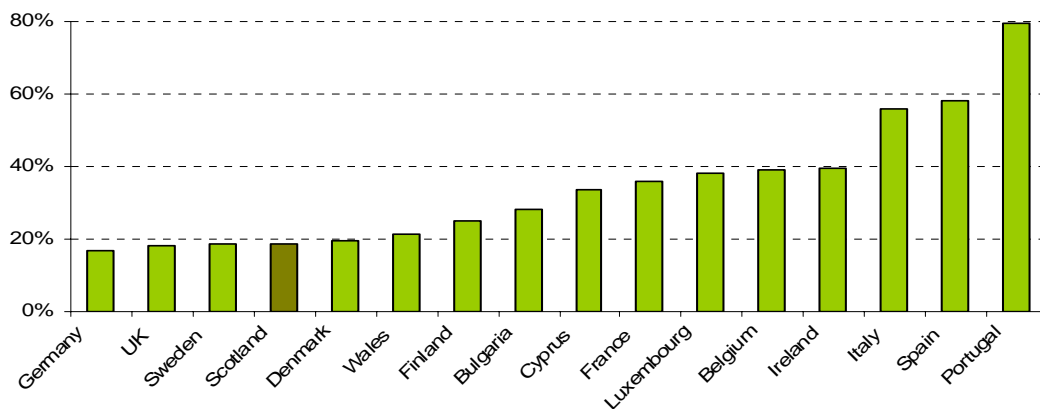


Chart 1 shows that:

- Scotland has a low proportion of 25-64 year olds with low qualifications
- Only Germany, the UK as a whole and Sweden have a lower proportion of lower skilled residents.

Chart 2: Proportion of 25-64 Year Olds with Medium Qualifications, 2002

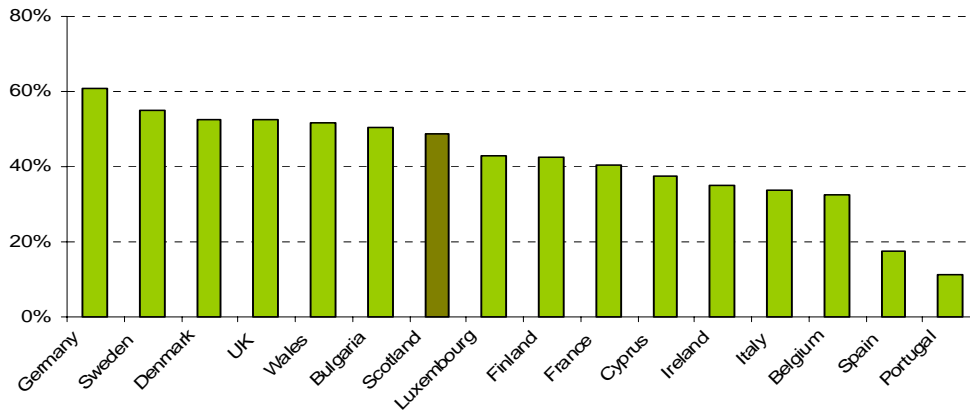


Chart 2 shows that:

- Scotland is a middle ranking performer in terms of intermediate (medium) level qualifications
- Germany and Sweden are the highest performers, with over 60% of their 25-64 population possessing medium level qualifications.

Chart 3: Proportion of 25-64 Year Olds with High Qualifications, 2002

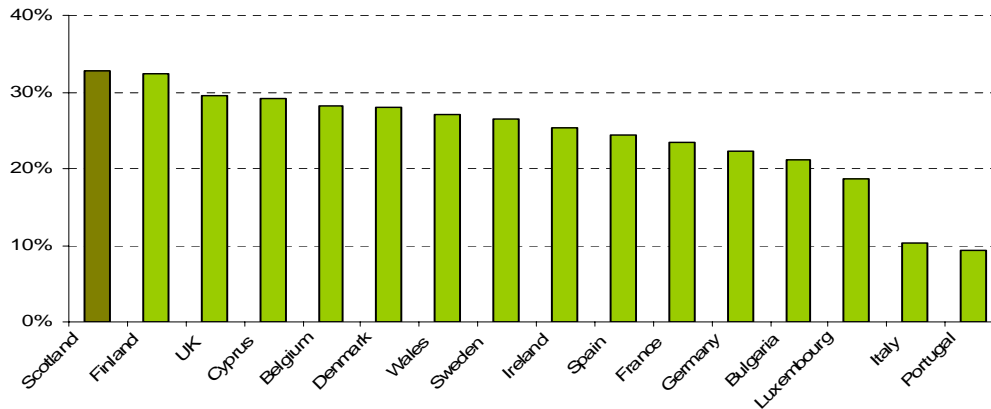


Chart 3 shows that:

- Scotland is the leading nation from the 16 European comparators, with over 30% of the population with high qualification levels
- Scotland has almost three times more people aged 25-64 with high qualifications as Italy or Portugal.

Chart 4: Research & Development Spending as a Proportion of GDP, 2001

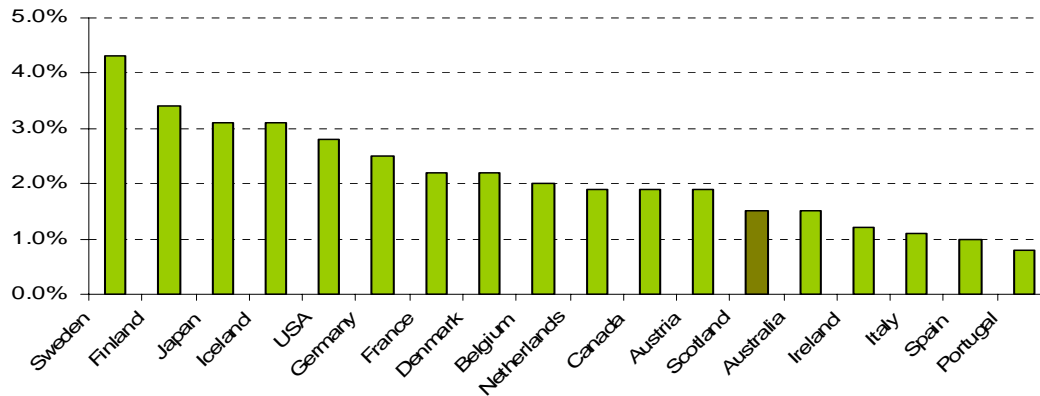


Chart 4 shows that:

- Scotland is a lower performer in relation to Research & Development (R&D) as a proportion of GDP
- The proportion of GDP spent on R&D in Scotland is less than half that spent in Sweden and some way behind Finland, Japan, Iceland, USA and Germany.

Chart 5: Proportion of 25-64 Year Olds Participating in Education and Training, 2002

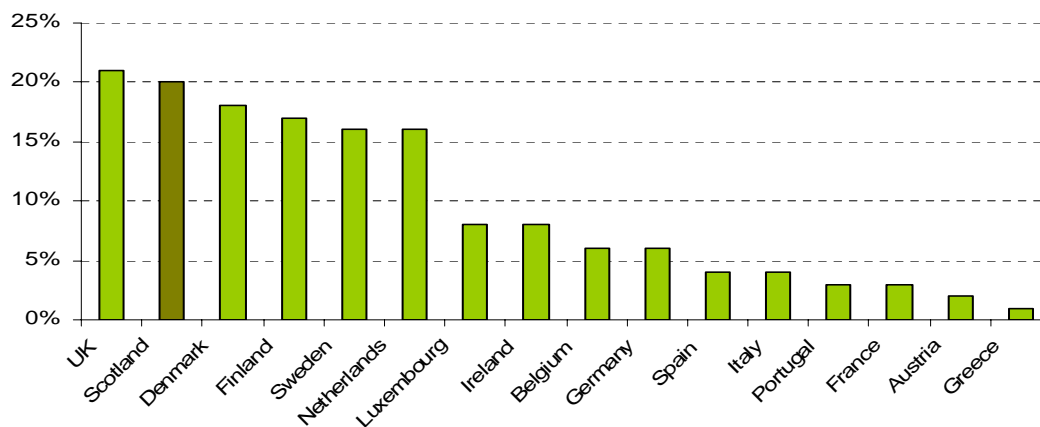


Chart 5 highlights Scotland's strong position on 25-64 year olds participating in education and training. In particular:

- Scotland is the second best performer from the European comparators behind the UK as a whole
- Scotland is just ahead of the Scandinavian countries (Denmark, Sweden & Finland) in education participation.

Chart 6 GDP per worker US\$ 2001

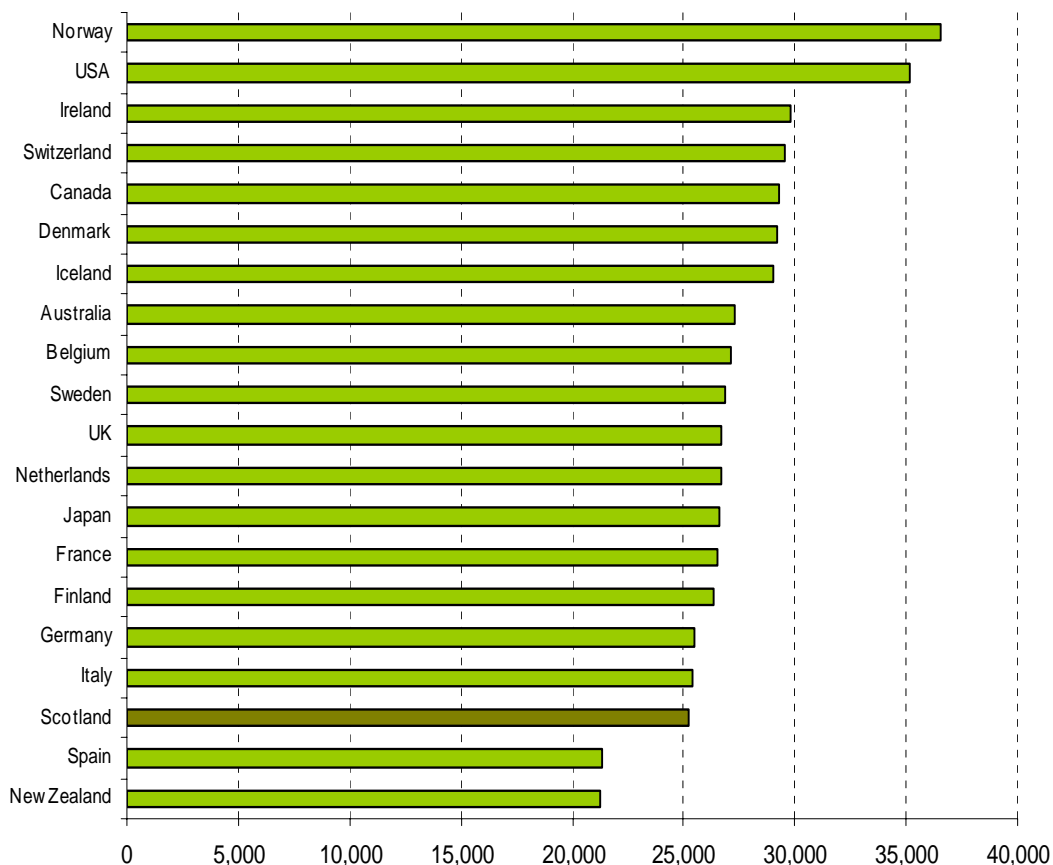


Chart 6 shows that:

- Scotland is one of the lowest performing OECD countries in terms of productivity per head
- The two leading nations (Norway and the USA) have productivity almost \$10,000 more per head than Scotland.

This highlights a significant overall issue – namely that despite Scotland’s relatively strong qualifications and training performance business productivity is still low. This suggests that the balance of skills may not be right or that training is insufficient or badly targeted.

The Promoting Workplace Learning project should therefore help to target and focus training better.

Chart 7 SSC Proportion of Staff trained in the Last 4 Weeks, 2002

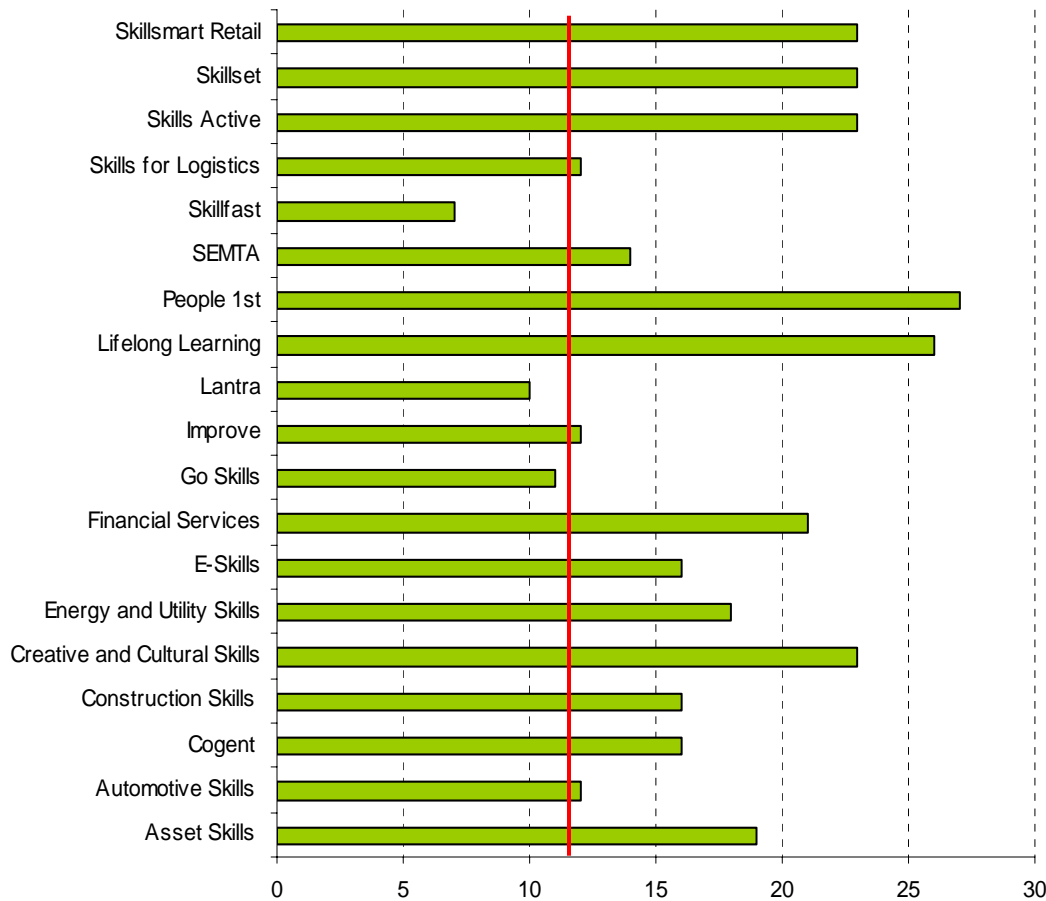


Chart 7 outlines the proportion of staff receiving training by their employer in the last 4 weeks for most UK SSCs⁵. This is set against the EU average (the red line).

The chart shows that:

- Just Skillsfast, Lantra and GoSkills provide less training than the EU average (11%) for all sectors
- People first and Lifelong Learning lead the SSCs for proportion of staff trained, with over 25% of staff receiving training in the last 4 weeks
- However, the average of the top 5 EU countries for training is 27%, which is above all SSCs in the UK (though people first is not far behind).

⁵ Data for Proskills, Skills for Care and Development, Skills for Health, Skills for Justice and Summit Skills were not available

Chart 8 SSC Proportion of Staff with High Qualifications, 2002

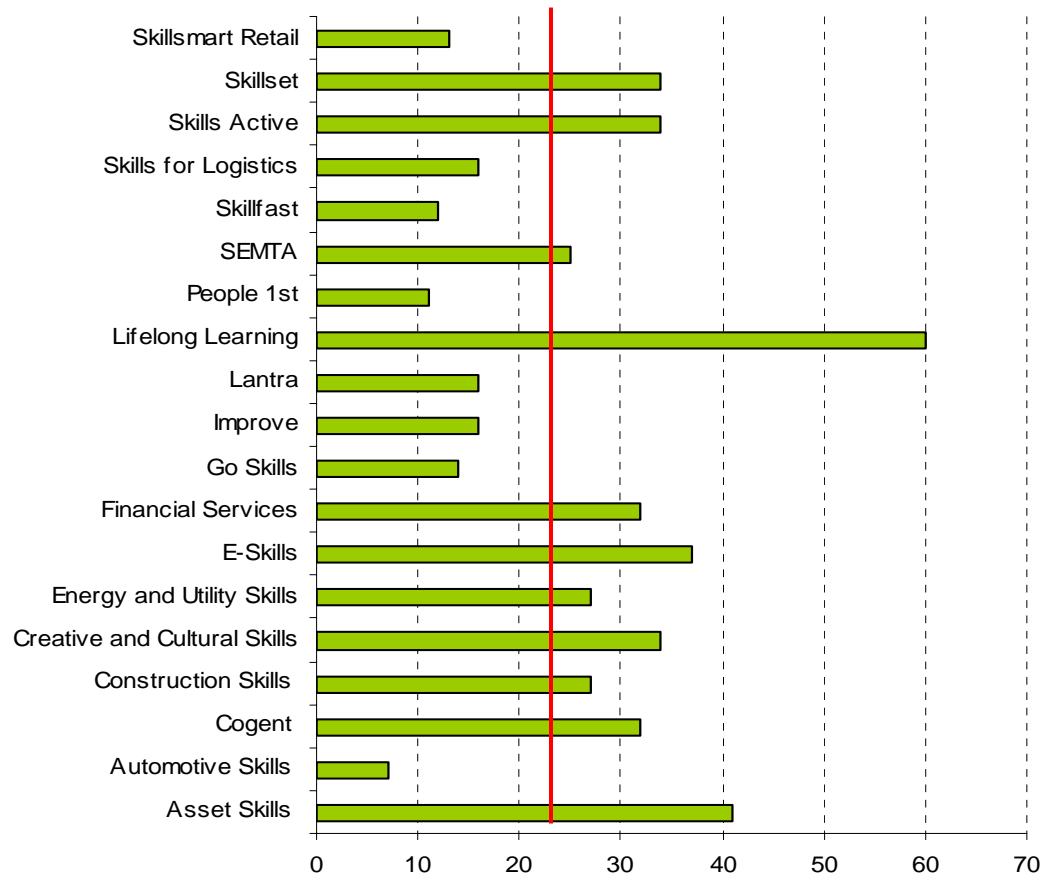


Chart 8 outlines the proportion of staff with high level qualifications for most⁶ UK SSCs. This is set against the EU average (the red line) of 22%.

The chart shows that:

- Around half of the SSCs in the UK have a lower proportion of highly qualified staff than the EU average
- Lifelong learning has the highest proportion of staff with high qualifications at 60%
- Automotive skills has the lowest proportion of staff with high level qualifications.

⁶ Data for Proskills, Skills for Care and Development, Skills for Health, Skills for Justice and Summit Skills were not available

5. CONCLUSIONS

This study suggests that skills are an important issue in Scotland and workplace learning is an important component of that.

The key messages from the work produced to support the Promoting Workplace Learning project were that:

- Smaller employers were less likely to train than larger firms
- Skills gaps arise disproportionately among people in jobs that typically need lower levels of skills (and are less likely to receive training)
- The majority of SMEs do not have a training or HR function suggesting that improvements in this area are needed.

The review of other UK research shows that there are a wide range of studies showing that higher skilled employees and training can have a positive impact on business performance. Key improvements can include:

- Higher profits
- More productive labour

- Greater innovation
- Staff more able to deliver higher quality goods and services
- Better wages for staff
- Greater returns on capital investment.

Finally, the international review of Scotland's skills position suggests that Scotland performs well on skills and qualifications measures but still has low labour productivity. This suggests that there is still work to be done in the use or organisation of skills in Scotland.

However, given that those who have higher skills and qualification are more likely to be trained and more likely to be able to learn this suggests that there should be improvements over the longer term.

Evidence on specific SSCs shows that they are as likely to train as the EU average but are some way behind the top performing countries.

The picture is more mixed in terms of workforce qualifications against the EU average but is again behind the top performing countries in terms of workforce qualifications.

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Chart 1: Proportion of 25-64 Year Olds with Low Qualifications, 2002. *Third Report on Economic and Social Cohesion – Main Regional Indicators, EU Commission.*

Chart 2: Proportion of 25-64 Year Olds with Medium Qualifications, 2002. *Third Report on Economic and Social Cohesion – Main Regional Indicators, EU Commission.*

Chart 3: Proportion of 25-64 year olds with High Qualifications, 2002. *Third Report on Economic and Social Cohesion – Main Regional Indicators, EU Commission.*

Chart 4: Research and Development Spending as a Proportion of GDP, 2001. *The Scottish Innovation System: Actors Roles and Actions, Scottish Executive.*

Chart 5: Proportion of 25-64 Year Olds Participating in Education and Training, 2002. *International Comparisons of Labour Market and Skills Performance, Futureskills Scotland.*

Chart 6: GDP Per Worker US\$, 2001. *International Comparisons of Labour Market and Skills Performance, Futureskills Scotland.*

Chart 7: SSC Proportion of Staff Trained in the Last 4 Weeks, 2002. *SSDA Sector Skills Matrix.*

Chart 8: SSC Proportion of Staff with High Qualifications. *SSDA Sector Skills Matrix.*