



The role of ICT and e-learning for Small and Micro Firms in the Yorkshire and Humber region

Summary

e-learn2work





1. Background to the overall project

The overall aim of the project is to enable small and micro firms (including social enterprises) to be more competitive, and employees of SMFs to improve their employment potential, by identifying ways to improve the use of ICT and e-learning to deliver learning to SMFs. The project places particular emphasis on identifying ways to support disadvantaged SMFs, sectors and employees. The project will support stakeholders within three broad categories; namely small and micro size organizations, content and software developers, and policy-makers, mainstream funders, intermediaries and other agencies working with the target groups.

Recommendations will be made to policy-makers and practitioners on how e-learning could accelerate workforce development within SMFs and their supply chains. The action research involves continuously working with both employers and employees. From this a better understanding will emerge of learning cultures, and how e-developers, trainers, SSCs and trade associations could refine their approach to better match SMFs needs, for example:

- Providing advice as to the needs and wants of SMFs;
- Identifying SMFs e-learning barriers;
- Identifying SMFs preferred e-learning methods;
- Making recommendations for the creation of new and demand-led specific e-learning materials;
- Evaluating the constraints and potential for e-learning as a training and learning medium within SMFs;
- Providing a greater understanding of the underlying reasons why SMFs reject training interventions.

With a view to covering the sub-regions of Yorkshire and Humber, a project partnership was therefore established (these partners are shown on the back page of this summary). This study has been carried out in the context of the themes of Equality and Diversity, Innovation and Empowerment. An EU transnational group (across six countries) is also contributing to the overall project, both in replication and complementary studies.

Within the context of the research and the findings it is important to consider that the project used a “broad” definition of e-learning as a:

“Term covering a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio and videotape, satellite broadcast, interactive TV, CD-ROM, and more. “Learning facilitated and supported through the use of information and communications technology” (JISC definition)”.

Research aim

The overall aim of this primary research (i.e. the subject of this report) is to evaluate the role of e-learning as an informal and formal training medium within SMFs, including those within the voluntary and community sector. All of the research took place in the Yorkshire and the Humber region. This study has focused initially on the demand side, i.e. by employers and the internal dynamics of learning, in the context of general business behaviour and the barriers to learning and specifically e-learning. This report only summarises the initial interviews with the SMFs (conducted in 2005 and 2006), with a second stage involving in-depth support and action research reporting later in 2007.



2. Methodology

Overview

In essence qualitative interviews took place with 426 SMFs across Yorkshire and the Humber. These companies were from a number of key sectors in the region, such as food and textiles (with further details contained in the sample section below). Within each of these sectors the SMFs were then randomly selected, although there was however a general aim to also to include companies/individuals who are “disadvantaged” (with an explanation of disadvantage shown later).

An Interview Schedule (discussion guide/“questionnaire”) was developed around 15 overall factors which were explored with owners/managers and employees of SMFS, with no pre-assumptions or leading with regard to the role of e-learning. This methodology enables the project to delve into a number of areas including; training behaviours, skills development; attitudes towards ICT and learning styles. The 15 factors are as follows:

1. **Nature of enterprise** – e.g. size and age
2. **Competition** – e.g. attitudes towards competition
3. **Management culture** - e.g. formal, informal, authoritarian, empowering
4. **Equality and diversity** - e.g. work-life issues, gender and age-related issues
5. **Critical authority nodes** - e.g. informal leadership centres, workplace learning facilitators, peer support, etc.
6. **ICT administrative usage** - e.g. within back office, within production/service areas
7. **ICT for training** - e.g. distance learning, home, onsite, via internet
8. **Natural learning processes** - e.g. formal versus informal
9. **Attitudes to using ICT** - positive or negative towards digital culture, the use and knowledge of technology in relation to business
10. **Cognitive learning styles** – e.g. across different staff, management acknowledgement of these
11. **Products and services** – e.g. implications for staff, back office, production and service staff
12. **Training culture and history** - e.g. formal, in-house, external, types of training
13. **Push-pull factors** - e.g. legislative compliance, taxation
14. **Other ICT experience** – e.g. outside of work, home internet use, eBay
15. **Business / enterprise performance** - e.g. turnover, reputation.

It is however important to note that the interview schedule was often inadvertently used as a business diagnostic tool. Using a diagnostic-reflective approach, this enabled the researcher to explore business critical issues with the owner/manager, and the staff where appropriate, also enabling discussion of the individuals’ skills and experience. A great deal of important was also placed on business critical issues and prioritising these. Where possible other information was also collected, e.g. using a learning styles audit.

Whilst in essence this is a large scale qualitative project, with rich literal information about the organisations’ cultures and behaviours, it has however been possible (to varying degrees) to quantify many of the findings. As this project continues further analysis of the data will take place to establish key themes or trends, e.g. in relation to certain respondent groups and by sector.



Other elements of the overall research programme

In addition to the primary research mentioned above, it should be stressed that there is actually a “suite” of activities and projects which complement each other. The key to this is a “Champions” (second) phase – this involves providing SMFs (who took place in the first stage of the research) with targeted support, including the delivery of e-learning by partners involved in the project. Research is also being conducted with this group (with 100+ SMFs), including assessing the learning journey, the distance travelled and how behaviours may have changed. A number of case studies will also be produced.

To support the overall aims of the project, a number of specific / themed reports, for example, learning styles and surveys with training providers from the public and private sectors on the barriers to providing e-learning have been commissioned. The results of this work will be available for publication later in 2007. Consequently, this report only features findings from the “pre stage” research and not the in-depth support “champions” phase. This latter stage will be critical in assessing the value of e-learning and in determining the “distance travelled” by the SMFs and how their behaviours and attitudes may, or may not have changed.

3. Sample

Interviews took place with a total of 426 SMFs across the Yorkshire and Humber, with a focus in sectors which are of a particular importance to the regional economy and also where key partners involved in the project have a particular expertise. A number of selection/recruitment methods were used, e.g. mail outs using a business database, cold calling and using “relationships” that partners already had with SMFs. This also involved networks, customers from other programmes and intermediaries. Quotas were however placed within each sector to ensure there was a robust sample for each. Interviews also took place with businesses in a comparator / “control” group, many of which fall under the retail sector.

Table: number of interviews by sector

| Sector | Number of SMF interviews |
|---------------------|---------------------------------|
| Food | 71 |
| Other Manufacturing | 65 |
| Textiles | 80 |
| Sport and Leisure | 76 |
| Social Enterprise | 65 |
| Comparison | 69 |
| Total | 426 |

A number of key statistics for the sample include that around half of the SMFs have less than 10 employees and the vast majority have less than 20 employees. The survey also sought to involve disadvantaged businesses and owners¹. A quarter were also “rural businesses”, which can often be “disadvantaged” from the perspective of being a significant geographical distance from more traditional learning providers.

¹ The project’s definition of disadvantaged was an “inability to compete effectively within a changing marketplace, cultural environment, economic environment or legislative framework. An inability to provide appropriate flexible working practices, learning or support for employees”

4. Key findings

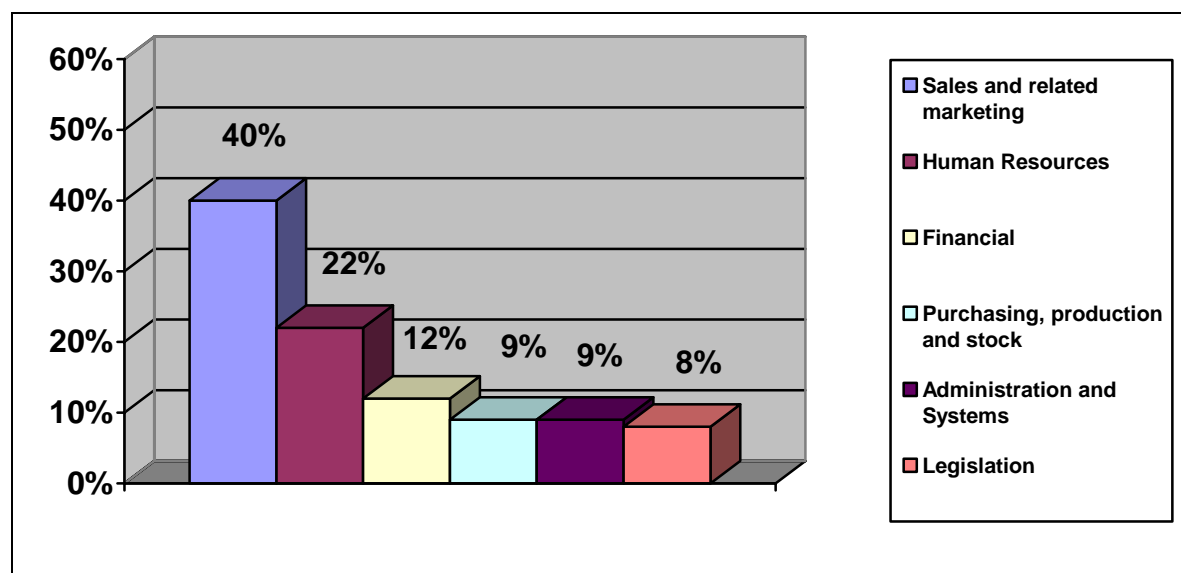
Context

It is important to consider the key findings, not only in relation to the “make up” and characteristics of the businesses interviewed, but also their general practices. These include that:

- Only a third of the organisations have regular staff appraisals;
- Only just over a third of the organisations have a staff development plan;
- Over three quarters do not have a budget for training. This is not however saying that businesses do not train, particularly where there is a legislative requirement and / or business need
- Of those companies which identified skill gaps, only two thirds said that they link these to business needs
- Less than half of employees think that a formal qualification is important to the company, with this being even lower in the eyes of owners/managers
- Perhaps not surprisingly, the results for owner/managers show that the age group 25-40 show the highest familiarity with computers, with employees familiarity with more complex pieces of software being lowest amongst the >55 age group.

Each owner manager was also asked by the researcher to state what they felt were their three most critical business issues. These issues are grounded in business language pertinent to the company involved and in conjunction with the company and have been translated into feasible learning objectives for the next phase of the project. The key findings are shown in the chart below.

Chart: business critical issues²



² Sales includes areas such as customer relations, marketing, etc, Human Resources includes training, IT skills, recruitment, etc, Administration includes accounting, negotiation, etc. and Legislation includes health, safety, food and hygiene, etc.



Technology in the Enterprise

A key finding shows that 6% do not have a computer. Almost all businesses (89%) have an Internet connection, and for most this is a broadband connection. It is however the case that only half of employees (52%) have access to the Internet through the business.

Within the business organisations, computers are mainly used for word-processing (71%), email (70%), and to access the Internet (65%). Other areas mentioned included labels (27%), stock control (30%) and payroll (31%). The highest owner/manager computer familiarity is with 1) e-mail, 2) Internet and 3) word processing and the lowest familiarity is with presentations, with very much the same pattern emerging for employees.

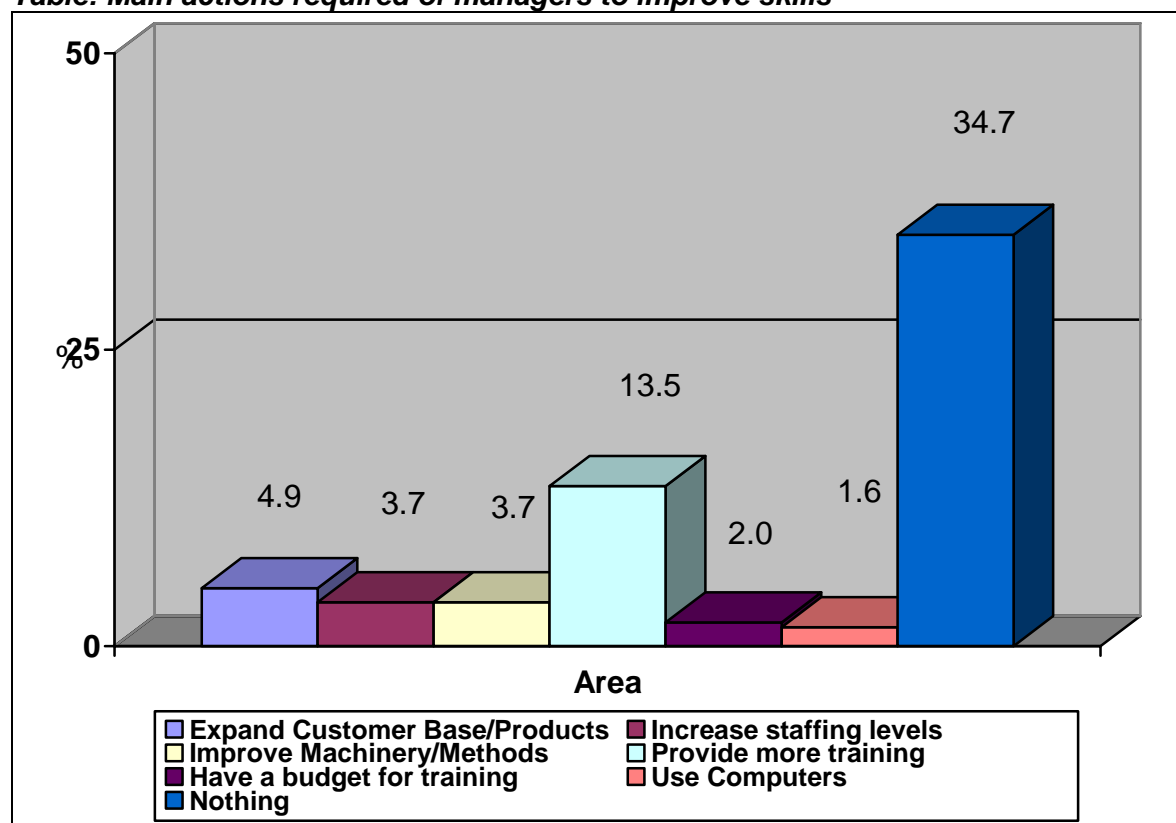
Another key finding is that less than half of the businesses surveyed use computers for developing skills. Of the reasons cited for non-use, a quarter of owner/managers gave a preference for face-to-face learning. The most common reason for using computers to develop skills is that it is the easiest way to find information.

Internal and External Drivers

Generally the businesses acknowledged that competition has influenced their requirements for additional learning and development. Three quarters of the companies recognise that there is a need to gain new skills to enable the business to remain competitive. The majority of the required skills were however linked to compliance and legislation (64%).

When employees were asked what the manager should do to improve skills a third said nothing, with only one in seven saying providing more training. The main (but certainly not all of the) responses are shown the chart below.

Table: Main actions required of managers to improve skills





Formal and Informal Learning

In relation to learning, the extent and benefits of (more) training were examined. The key points include:

- Only half of employees said training opportunities had been identified for them and again
- Again half said that they had actually undertaken some external training in the last 12 months, with a mix of formal and informal learning. Some were however currently undertaking training outside of work
- Almost two-thirds of employees think they would benefit from more training in their current role.

Where owner/managers experienced training, it was often technical, product or apprenticeship. In addition a fifth of training (20%) was classified as “general management”. As well as the key responses shown under the general management heading, there were also a number of areas which were mentioned by a smaller number of respondents, e.g. marketing, negotiation skills, etc. Nearly half however did not mention any (recent) training.

Table: main types of training owner/managers received

| General Management (Identified by types of training within Management) (%) | | Technical/Product based or Apprenticeship (%) | Not had any training/no response (%) |
|---|-----|--|---|
| Main areas: | | Includes specific job training skills and general IT training which is < Level 3 | Individuals who have not had any training at all or who declined to comment |
| Management - | 47 | | |
| Health & Safety - | 20 | | |
| Accountancy - | 5 | | |
| Total as a percentage of the whole | 20% | 32% | 48% |

A quarter of employees felt that they were adequately trained. The most common training need identified was technical/trade related (39%), with general management (18%) and ICT following (13%). A smaller number of responses (i.e. 3% or less) were recorded for a number of issues, such as legislation, e.g. tax, fire, health, food hygiene, stock management and control and HR and recruitment / selection training.

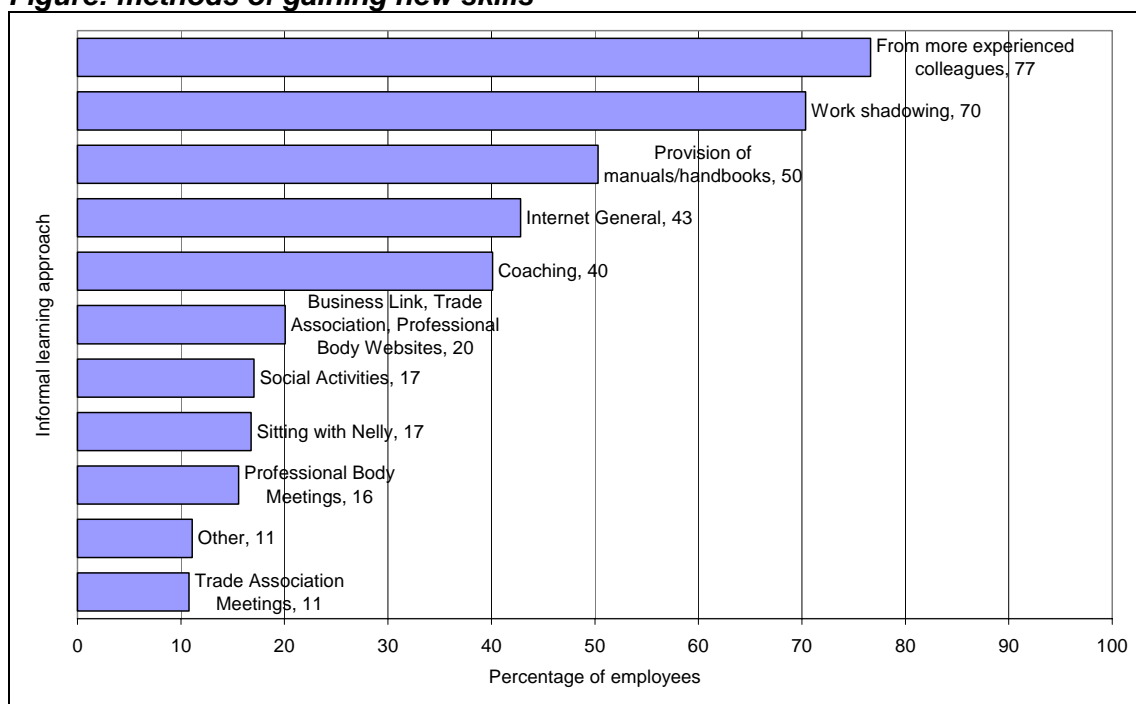
Table: Types of training employees perceive they would benefit from

| Area | % |
|---|----|
| Training - trade/technical | 39 |
| Training - IT (software), e-commerce | 13 |
| Training - general management | 18 |
| Adequately trained no training required | 24 |

In relation to learning styles, the research focused mainly on informal approaches. Many methods of gaining new skills / learning approaches were mentioned, such as from more experienced colleagues, work shadowing, with the internet also featuring highly.



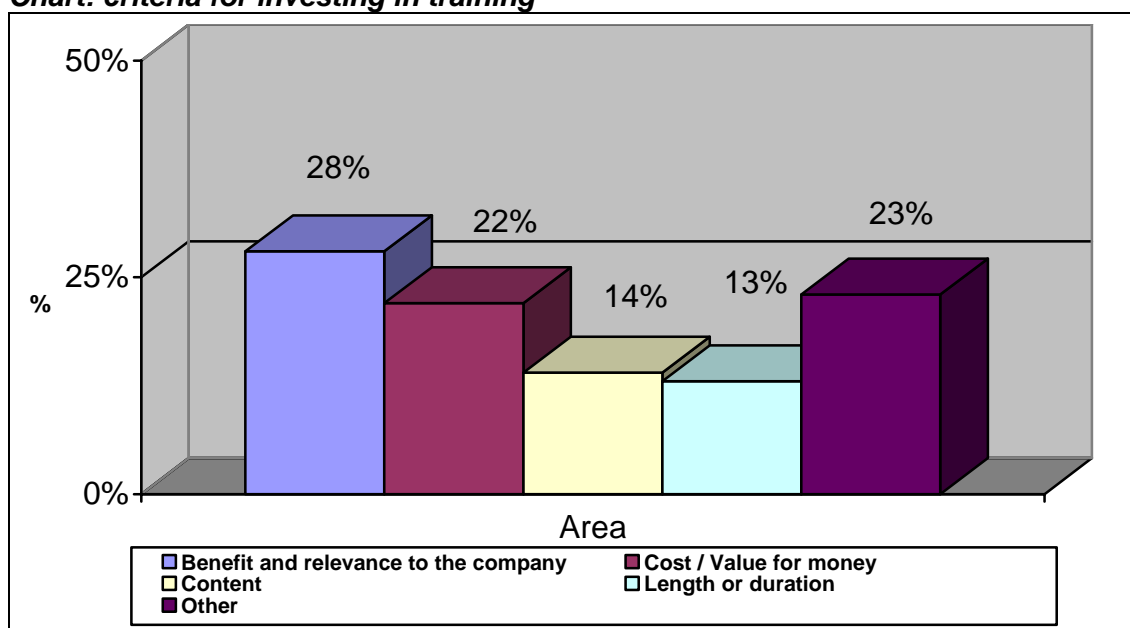
Figure: methods of gaining new skills



Although not shown in detail here, the ways in which learning is recognised was asked. Again much of this was informal, e.g. verbal acknowledgement, although better job opportunities, increased pay and employees being given certificates also featured.

Naturally employers have a number of criteria that they consider before investing in training. The key reasons are linked to those seen in other surveys (e.g. the National Employer Skills Survey) and are around cost, time, benefit to the enterprise and relevance of course content, with these included in the chart below.

Chart: criteria for investing in training





Attitudes to and experiences of Learning

Positively the vast majority of managers and majority of employees felt there was an opportunity to undertake learning during working hours, with to some degree a willingness to learn outside of working hours. Although only a minority (20%) of owners had ever completed an **online course**, the vast majority found it be either useful or very useful.

The actual on-line courses conducted by employees and owners fall into six main categories, e.g. management, ICT, etc. This information is also shown by sector as there are some key differences seen in this area.

Table: on-line courses the areas in which owners and employees gained skills

| Sector | | ICT (%) | Management (%) | Technical (%) | Legislation (%) | Part of degree (%) | Basic Skills (%) |
|------------|----------|---------|----------------|---------------|-----------------|--------------------|------------------|
| Food | Owner | 3 | 0 | 0 | 0 | 0 | 0 |
| | Employee | 3 | 0 | 0 | 0 | 0 | 0 |
| Other Man. | Owner | 7 | 42 | 0 | 20 | 33 | 0 |
| | Employee | 13 | 29 | 0 | 0 | 0 | 0 |
| Textiles | Owner | 37 | 17 | 0 | 0 | 33 | 0 |
| | Employee | 34 | 43 | 50 | 50 | 50 | 0 |
| Sport | Owner | 10 | 8 | 0 | 20 | 33 | 0 |
| | Employee | 6 | 29 | 0 | 0 | 50 | 0 |
| Social Ent | Owner | 13 | 8 | 50 | 40 | 0 | 50 |
| | Employee | 28 | 0 | 0 | 50 | 0 | 100 |

Views around any on-line courses were generally positive, e.g. almost universally managers felt that the course was easy to use and it was easy to understand the content. Common forms of a support experienced including face-to-face meetings with a tutor, telephone and e-mail support from a tutor and the use of a technical help line. Nearly a third did however (29%) did experience technical problems.

Quotes from owners/managers relating to skills needed to remain competitive:

“E-commerce is the way forward and I need to be up to speed on making the most of this marketing medium - lots of other businesses do it, particularly in our field and I am completely lost with it.”

“The website is one of our best marketing tools.... it helps to get our name known and the brand out there - we need skills and software to create a new competitive environment in this company”

“We need to develop new marketing skills, but this is a real weak point. We are unsure how to market the website. The company doesn't have a big enough budget to buy the expertise in and we do not have the time.”

Summary, conclusions and recommendations

This research work seeks to evaluate the role of e-learning as an informal and formal training medium within small and micro-enterprises. Again it should be stressed that the following is primarily based on this first stage of the research programme. A range of approaches / technologies, e.g. blended learning, mobiles, etc. and not just PC based solutions, are to be utilised within the champions phase.



It is felt that SMFs have difficulty in recognising and realising the potential business value of 'technology enhanced' workplace learning, with existing e-learning approaches not aligned to core business operations and objectives. In the research SMFs have also raised common barriers they face in relation to learning, e.g. lack of interest and time and cost.

Most owner/managers interviewed were qualified and experienced in relation to their product and or service but had very little training in how to manage and run a business. Through working with these SMFs, the SSCs, developers and training providers, a learning framework and e-learning materials could be further developed to include Information Advice and Guidance. This knowledge development and sharing could be captured through a community of practice and could be available for new and existing owner/managers.

From the survey, in terms of technology within the business, the vast majority have computers (although 6% do not). The main uses were however for "general" purposes, e.g. word processing and e-mails. Micro businesses will however use e-communication with external contacts more readily than internal colleagues - this could have implications for supported e-learning where external, remote support is required as this is often promoted as being through Virtual Learning Environments, Chat Rooms and e-mails. e-learning could also be used to develop "marketing partnerships".

Only half of all employees had undertaken any learning in the last year, yet the majority of firms felt that there was a need to improve skills to remain competitive and two thirds of employees felt that they would benefit from more training. There is however little evidence of a pro-active approach to addressing such skill gaps, with a general lack of any evidence for methods of capturing the knowledge and skills acquired informally. Learning and training are perhaps 'problem words' and due to the very practical nature of the businesses, they do not see such needs as 'training', but simply as resolving problems related to their business / job.

The need for SMFs formal learning can often be prompted by legislative/compliance requirements (although a significant amount of all training is in relation to technical skills and "general management"). Most learning is however informal and generated by a 'business need'. Generally training is seen as a cost, not an investment. Cost effective e-learning together with a "community of practice" for SMFs may support continuous development.

The methods of gaining new skills involved a variety of informal learning approaches, including a significant amount of knowledge being acquired through the Internet. Most SMFs stated that easy access to information and flexibility were the main reasons why they developed skills through the use of a PC. Because of this, a portal with a community of practice for SMFs, monitored and maintained/updated by them, would be an effective and economical way of capturing the informal learning that takes place within these organisations. It is also clear that from both the owner/managers and the employee's perspective that the preferred way of gaining knowledge and skills is often through working informally within their own organisation. Processes such as observing or simply chatting with a colleague are seen as natural forms of interaction.

Of the relatively small proportion who had completed an online learning courses, whilst they found this very useful, they did appear to some degree to have suffered from poor tutor support, technical problems and many of the courses contained a great deal of text and it was easier to read a printed manual. A standard e-mentoring system may help to overcome such problems and ensure that e-learners feel comfortable with the support they receive.

The project will however continue to test whether or not SMFs are better disposed to e-learning after participating in the Champion phase and to then answer the question 'Does e-learning live up to its propaganda by positively addressing this challenge?'



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