Corporate *e*Learning:

Human Resource Development Implications for Large and Small Organisations

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Abstract:

This paper compares and contrasts the current attitudes towards, awareness of and take-up of eLearning in large and small organisations and outlines the implications for Human Resource Development (HRD) Professionals. An in-depth study was conducted in Ireland with a number of large multinational organisations and a number of Small and Medium sized Enterprises (SMEs) in the engineering, electronics, aerospace, pharmaceutical and medical device sectors. The study focused on awareness, perceptions, technology support infrastructure, current and planned involvement, most frequent and most preferred methods of delivery, benefits, barriers, the motivational factors and overall attitudes to eLearning. The comparison describes a number of similarities and a number of differences both within the large organisation sector and within the SME sector and between the two sectors. Finally the implications for HRD professionals are discussed.

1.   Introduction - Lifelong Learning and eLearning

As Human Resource Development (HRD) practices shift away from training and towards learning, the notions of lifelong learning and electronic learning (eLearning) are emerging in the HRD literature. Lifelong learning is defined by Brandsma (1997) as a continuous process of personal development for everyone, whether in work or not, encompassing formal and informal activities, and making demands upon the social structures in which learning takes place. The European Commission's 2001 communication entitled "Making a European area of lifelong learning a reality" outlined the goals of an expanding European Union "to be more prosperous, inclusive, tolerant and democratic" (European Commission, 2001, p. 3). Most learning – for good or for bad – takes place in everyday life and work social situations. In other words, most of our learning is informal learning taking place in a variety of social contexts. Consequently, unless the social systems – the families, communities and organisations – in which people live and work provide an environment for developing their potential and resourcefulness, then the lifelong learning goal cannot be achieved. In this respect the communication goes on to state that in the context of creating a culture of learning across Europe that there is a need "to develop learning communities, cities and regions" (European Commission, 2001, p. 21).

Many European governments are encouraging lifelong learning; for example the UK in particular highlights the changing nature of work, the need for re-skilling as traditional industries decline and new technologies emerge, and the need for everyone to engage in ongoing learning. According to Sambrook & Stewart (2000) one of the key reasons cited for aspiring to become learning organisations is the need to cope with technological change to compete. As noted by Sambrook (2004), a key government initiative in the UK was the launch of the University for Industry (UFI) renamed "learndirect", where computer-based learning materials are located in learndirect centres – public places such as libraries, local colleges and hospitals. This facilitates access to personal and work-related learning by existing and potential employees, to enhance both their attitudes to learning and their personal knowledge and skills. However, although e-learning could deliver the national lifelong learning agenda, at the European level, researchers have critically evaluated the European policy for eLearning (Attwell, 2002).

According to Sambrook (2004) electronic learning, often abbreviated to eLearning, can be defined as any learning activity supported by information and communication technologies (ICT). According to Blocker (2005) eLearning encompasses training, education information, communication, collaboration, knowledge management and performance management.

It must however also be remembered that learning is inherently complex (Stevens, 2002). One of the principal criticisms of many learning technologies, especially eLearning applications, is that they seem to be predicated on assumptions of learning that are overly simplistic (Brown et al., 2004). We can refer for example to many problematic attempts at using the Web or other forms of ICT to supplant or substitute face-to-face interaction between students and peers and tutors (Brown et al., 2003).

2. Rationale – The importance of eLearning for Human Resource Development

As eLearning becomes more mainstream, there are a number of implications for HRD professionals. According to Blocker (2005) eLearning addresses business issues such as reducing costs, providing greater access to information and accountability for learning, and increasing employee competence and competitive agility. According toCrowley (2002) "Cisco maintain that eLearning can be thought of as a critical element of any enterprise workforce optimisation initiative". However, according to Schetler (2003) HRD professionals who are trying to solve training problems with eLearning focus too much on training metrics, as opposed to accepting that between 50 and 70 percent of what is learned on the job is unstructured and assimilated through informal contact and content. In Cheese's (2003) Executive Issues survey of 1,000 executives from operations in North America, Europe and Asia, four issues in which eLearning could be effectively applied include:

1. **Retention:** Research shows a remarkable correlation between training and retention. Employees who say they have access to the training that they need to be successful are more than two times more likely to expect to be with the company in two years.
2. **Employee attitudes and culture:** Those same employees with access to the right training are six times more likely to think that their firm is a "great place to work."
3. **Improved work-force performance:** Based on the analysis of more than 60,000 professionals, 85 percent believed that training had resulted in at least a moderate increase in their skills or knowledge, and 53 percent attributed a significant increase in productivity to training.
4. **Customer service:** Research studies at Ford Motor Credit and a number of other recent studies found a direct correlation between customer satisfaction scores and work-force attitudes about training and development, teamwork, workload, and job satisfaction.

Finally there are a number of key differences between the implications in large and small organisations that are discussed in the following sections.

3.   eLearning in large and small organisations

There has been much published on eLearning in the corporate sector (Masie, 2001; Bonk, 2002; Garavan and O'Donnell, 2003; Sambrook, 2004; Skillsoft 2004; Blocker, 2005) Bonk's 2002 survey received over 200 corporate respondents and was focused on web-based training practices, experiences, tool preferences, instructional approaches, assessment methods, obstacles, and support structures. Some of the key findings included:

- Respondents were primarily interested in Web-based learning as it increased access to learning (86%). Two-thirds of respondents noted that growth in employee skills, ability to track learner progress through a learning management system, and increased job performance were key reasons for their interest.
- Most organisations were using Web-based learning as an alternative to instructor-led courses (66%) or as a supplement to traditional instructor-led training courses (53%). About one quarter used it as a follow-up to live instruction. One in five used the Web as the sole source for learning.
- Commercial courseware was deemed highly useful by 66% of respondents and was actually used by 57% of their organisations.
- The primary cultural or organisational obstacle to Web-based learning, according to the respondents, was the perception of high cost (44%). Other serious cultural/organisational inhibitors to Web-based teaching and learning included instructor time to prepare courses (36%), resistance to technology (33%), the lack of organisational support (32%), difficulty measuring ROI (27%), and a lack of training on how to use the Web (25%).
- Both lack of time (46%) and lack of incentives (29%) were key reasons cited as to why learners dropped online courses. While poorly designed courses were mentioned by 17% of respondents, only 2% indicated that costs inhibited course completion.

According to Blocker (2005) eLearning assists in keeping employees' skills current to help bottom line performance eLearning and many organisations are looking to embrace eLearning as a means to ensure regulatory training.

Attitude to, awareness of and take-up of eLearning in SMEs is significantly lower than in large organisations as outlined by Brown et al. (2004). Research by Tansy Webster (2002) on accessibility of training for SMEs in Ireland identified the following barriers to access: Affordability (42%); lack of local availability (25%); too disruptive to release personnel (74%). Sambrook (2004) found similar views in her study of e-learning in Welsh SMEs.

Despite research carried out on the benefits of eLearning, the take up in Europe amid SMEs is lacklustre. Slater (2002) outlines that in order to maximise the effectiveness of their internal and informal learning processes, SMEs may first need to identify those barriers currently in place. Attwell (2003) established that technological advance has not been accompanied by improvements in the pedagogies these platforms facilitate. Also, the cost of server software applications, let alone the difficulties in installing and maintaining server-based systems, is beyond the reach of most SMEs. This leaves them the option of using CD-ROMs, which although useful in some contexts, do not allow communication between learners, or buying off the shelf courses from providers operating their own platforms and servers. The limited nature of the material gives little choice or opportunity to SMEs wishing to pursue this form of learning.

Brock (2000) points out that SMEs tend to use ICT more as tools to support organisational tasks like administration and accounting, rather than for formal, internal communications as in larger organisations. However, the size of the firm does not necessarily determine levels of ICT awareness, as very small firms can be highly IT sophisticated (Gray and Lawless, 2000), cited in Sambrook (2004). There is evidence in Irish SMEs of increasing proficiency in e-commerce in general, with owner-managers the driving force (Barry and Milner, 2002). From a European perspective, Oberski & Palomar (2000) found that online courses for managers in SMEs are only effective if there are collaborative links between educational providers and enterprises.

Having briefly outlined existing knowledge, the next section presents our own research study.

4.   Outline of Study and Results

There were two parts to our particular study. The first part involved an in-depth analysis of eLearning in selected Irish based high-technology large companies that spanned a range of sectors including: electronics, aerospace, pharmaceutical and medical devices. 16 individuals responsible for training in 11 organisations were interviewed. The second part of the study focused on the SME sector.

4.1   The Large Organisation Survey

The survey initially established what each organisation's current involvement in eLearning was and how long they had been using eLearning for. Figure 1 shows that 67% of organisations have been using eLearning for some time (greater than 5 years).
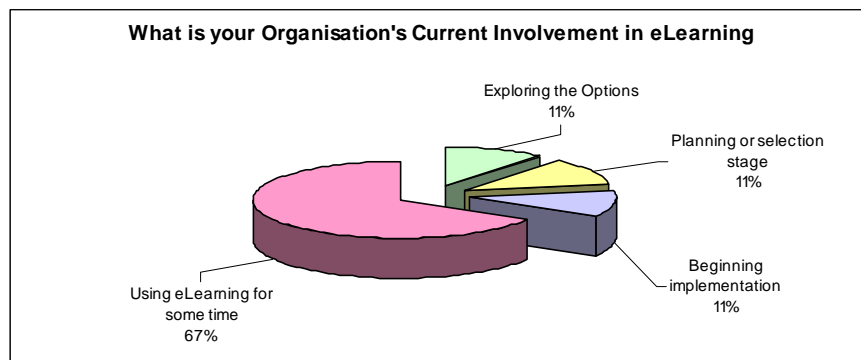

Figure 1. Organisations current involvement in eLearning

It then established their investment plans for eLearning for the next 2 years, as outlined in figure 2.
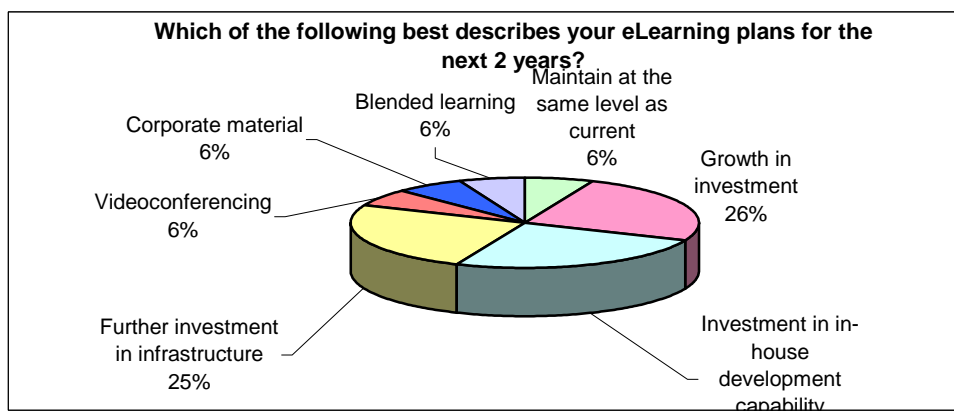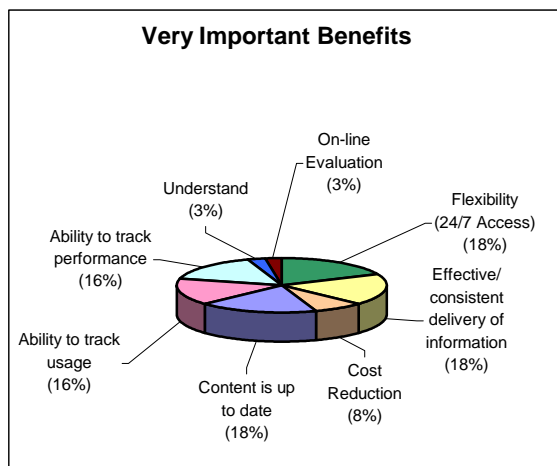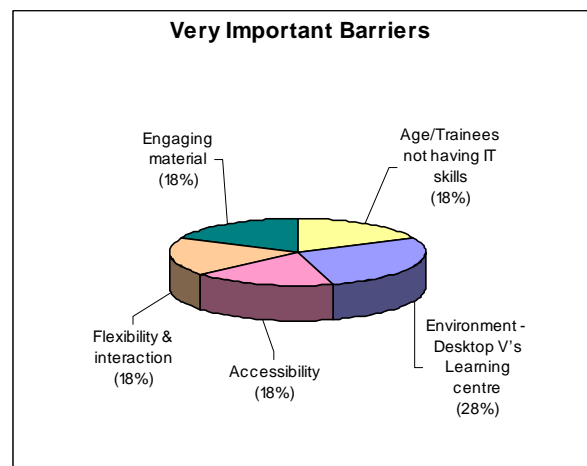

Figure 2. eLearning investment over the next 2 years

In excess of 90% of respondents indicated that there would be further investment in eLearning. Twenty-five percent indicated that there would be an investment in in-house development capability and 25% indicated that there would be further investments in infrastructure with 40% of that infrastructural investment in some form of Learning Management System.

The survey established departmental responsibilities for eLearning. In more than 80% of cases the training and development departments were responsible for the original embedding and the fostering of eLearning within organisations. Again in the majority of cases eLearning was both a corporate and a local initiative. In most organisations Training and Development were responsible for the administrative and data management aspects of eLearning. The Information Technology departments or outside contractors were responsible for technical and technology report – often corporate Information Technology where the infrastructure was their responsibility. It was a mix of the business units/departments and Human Resources that typically determined what eLearning content was available. eLearning content was typically paid for by those business units that required it either directly or by some form of central headcount allocation to Training and Development who then paid for the eLearning content. Most organisations indicated that approximately 20% of training was carried out using eLearning (up to 40% in technical skills and as low as 5% in soft skills) and most felt that there would be up to a 25% increase in the amount of training that was planned to be undertaken using eLearning over the next 2 years. Personal Perceptions on benefits and barriers as per a Skillsoft survey (2004) were then established as outlined in figures 3 and 4.
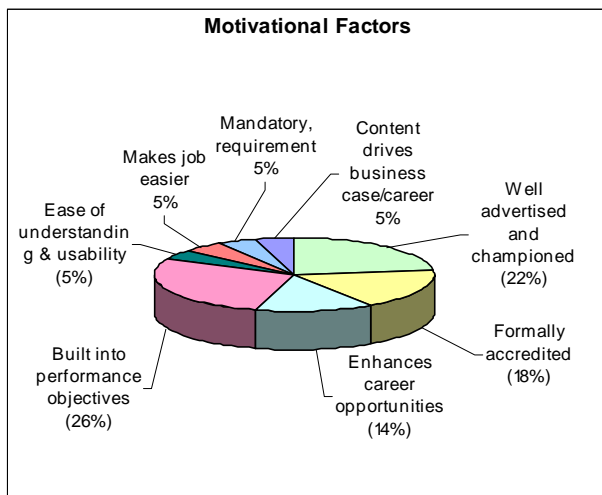

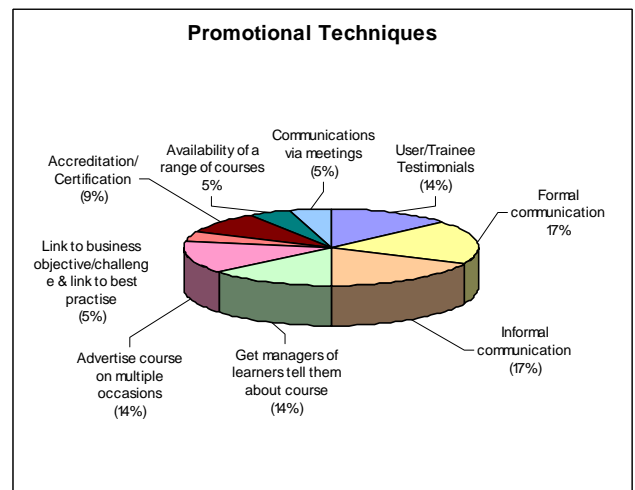**Figure 3. Benefits to eLearning**   **Figure 4. Barriers to eLearning**

The primary benefits included flexibility (24/7 Access), effective consistent delivery of information and the fact that content is up to date. The primary barrier was the delivery environment; 28% felt that, due to motivational issues and interruptions, courses delivered to the desktop were not as effective as those that were undertaken at a dedicated learning centre. Another very interesting finding here was that cost reduction figured as a very important benefit to only 8% of large organisations.

Motivational factors as suggested by Masie (2001) and promotional activities that are more likely to lead employees to undertake eLearning courses were then investigated. These are outlined in figures 5 and 6.

Motivational Factors

- Mandatory, requirement 5%
- Makes job easier 5%
- Content drives business case/career 5%
- Ease of understanding & usability (5%)
- Well advertised and championed (22%)
- Built into performance objectives (26%)
- Enhances career opportunities (14%)
- Formally accredited (18%)

Promotional Techniques

- Accreditation/Certification (9%)
- Availability of a range of courses 5%
- Communications via meetings (5%)
- User/Trainee Testimonials (14%)
- Link to business objective/challenge & link to best practise (5%)
- Formal communication 17%
- Advertise course on multiple occasions (14%)
- Get managers of learners tell them about course (14%)
- Informal communication (17%)

Figure 5. Most important motivational factors

Figure 6. Most preferred and most frequently used promotional techniques
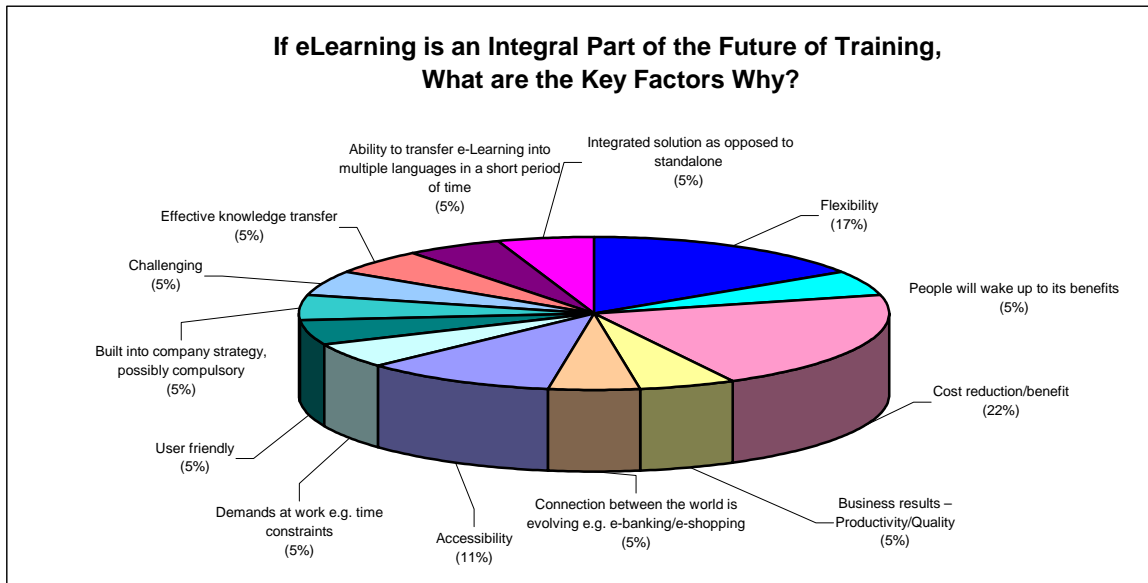
As a follow up to the study by Garavan and O'Donnell (2003) a series of subjective perceptions of eLearning were assessed by asking the interviewees to agree/disagree with the following statements as outlined in table 1:

	Agree	Somewhat Agree	Somewhat Disagree	Disagree Totally
1. eLearning demands a new attitude to learning on the parts of learners	50%	37%	13%	
2. eLearning is appropriate for training in continuous improvement skills (Lean, 6 Sigma etc.)	57%	29%	14%	
3. eLearning demands an entirely new skill set for people involved in training and development	74%	13%	13%	
4. eLearning is more effective when combined with traditional forms of learning	100%			
5. The current generation of eLearning products does not demonstrate what the future will look like	62%		25%	13%
6. eLearning is over-hyped by vendors	50%	13%	13%	24%
7. eLearning will only have a marginal effect on class-room training	13%	37%	37%	13%
8. eLearning provides the possibility of wasting a lot of money	50%	13%	37%	
9. A Lot of eLearning is low on content	13%	37%	37%	13%
10. eLearning is a threat to traditional training providers		13%	25%	62%
11. eLearning is the most important development in training in our lifetime		42%	29%	29%

Table 1. Perceptions of eLearning

There was only consensus on agreement on one point. All particpants agreed that eLearning is more effective when combined with traditional forms of learning i.e. that a "blended learning" solution is preferred. The survey then established that, if eLearning is to be an integral part of the future of training, what are the key factors why. The main finding here was that cost reduction/benefit was identified as the single most important factor – which is significantly

different from the 8% that currently identified cost as a most important benefit. Figure 7 outlines the findings:
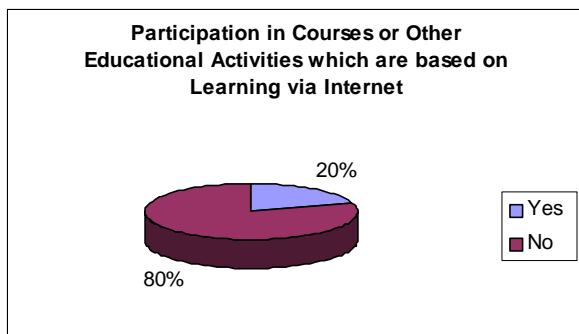

Figure 7. Key factors why eLearning will be an integral part of the future of training

Finally, the survey established whether the organisations and the interviewees were supporters of eLearning. There was a 100% positive response i.e. in all cases both the interviewee and the organisation were supporters of eLearning.
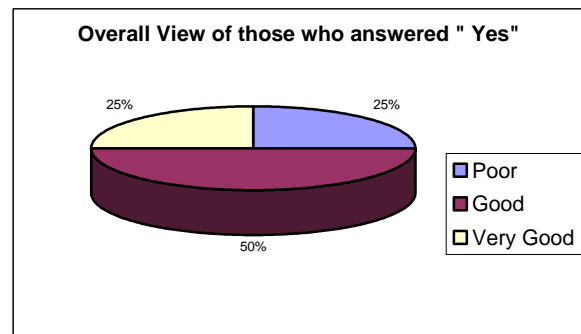
4.2   The Small and Medium Size Enterprise Survey

For the SME survey, 100 SMEs in 5 countries across Europe were surveyed, namely Ireland, UK, Sweden, Spain and Poland. The focus was on 3 selected sectors: component manufacturers (particularly polymers), the food sector and engineering products/sub-supply companies. These particular sectors are faced with growing and relentless competitiveness challenges from both low cost regions and from over-emphasis on low value-adding activities. Again, the focus of the SME survey was on the optimum ICT technologies to use in the delivery of training, bearing in mind the technical, financial and cultural restrictions within the general SME environment. This included pedagogical considerations, communication technologies, network support services and on-the-job facilitation. The results below pertain only to the 21 companies in Ireland to facilitate comparative analysis with Irish large organisations.

Figures 8 and 9 show that only 20% of respondents (n=21) have previously participated in internet based learning courses but of those 50% found them good and 25% found them very good.
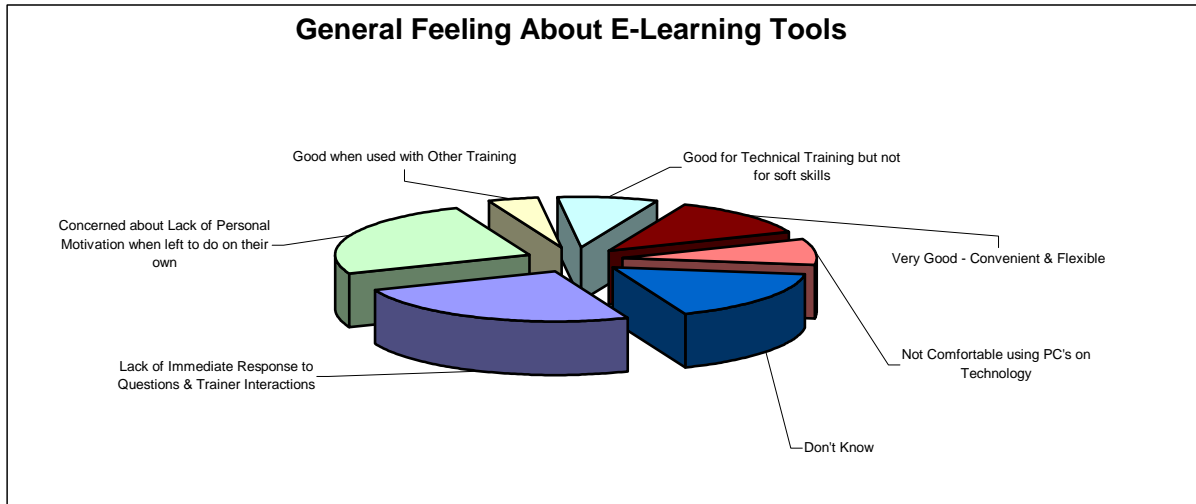

Figure 8. Participation in Courses which are based on Learning via Internet

Figure 9. Overall View of those who answered " Yes"

As outlined in figure 10, the main concerns that were highlighted with eLearning courseware were:

1. Lack of immediate response to questions and trainer interactions
2. Concern about lack of personal motivation when left to do on their own

General Feeling About E-Learning Tools

Good when used with Other Training

Good for Technical Training but not for soft skills

Concerned about Lack of Personal Motivation when left to do on their own

Very Good - Convenient & Flexible

Lack of Immediate Response to Questions & Trainer Interactions

Not Comfortable using PC's on Technology

Don't Know

Figure 10. General Feeling About ELearning Tools

5. Comparative Analysis

In terms of involvement in and experience of eLearning it is quite clear that the large organisations are significantly ahead of the small and medium enterprises. All large organisation respondents had some involvement in eLearning and 67% have been using eLearning for some time (greater than 5 years). This compares to only 20% of the SMEs that have had any involvement in eLearning. Both the large organisations and the SMEs indicated that there were a number of benefits and pitfalls to eLearning being effective learning. Both groups still considered face to face training as being more preferred in terms of effectiveness than eLearning but all agreed that eLearning would be an integral part of the future of training. The primary barrier from the large organisation perspective was the delivery environment with 28% concerned that due to motivational issues and interruptions, courses delivered to the desktop were not as effective as those that were undertaken at a dedicated learning centre. The primary barriers from the SME perspective was again the concern about lack of personal motivation when left to complete courses on their own but even more so was the lack of immediate response to questions and trainer interactions. Within the large organisations, there were significant differences to the response that eLearning is the most important development in training in our lifetime with 42% somewhat agreeing, 29% somewhat disagreeing and 29% disagreeing totally. What is clear is that eLearning is here both for large and small organisations, it is here to stay and that there are a number of HRD professionals that have not as of yet accepted this. This requires a mindset change amongst those HRD professionals. It must also be noted that the eLearning is about exploiting the technology to enhance the learning as opposed to using the technology just because it is available.

6. Conclusions, Recommendations and the Implications for Human Resource Development

Experience and usage of eLearning technologies and content is significantly higher in the large organisations (Usage = 67% > 5Years) than the SMEs (Usage = 20% total). Both groups agree that eLearning courses are more effective when undertaken in a dedicated learning centre as opposed to being delivered to the desktop primarily due to a lack of motivation when left to undertake the course on their own. Cost is always an issue for the SME; Cost is currently not the most important concern for the large organisation but will be vital in the future.

The consensus among both the large organisations and the SMEs is that eLearning is more effective when combined with traditional forms of learning and that the future lay in some form of "blended learning" solution. This has also been borne out in the literature by a number of commentators including Sloman & Reynolds (2003).

It is clear that changes in the modern workplace and in business processes raise expectations that eLearning will meet HRD needs. The primary benefit for embracing eLearning for organisations is that we can now distribute HRD programmes anywhere, anytime and cost-effectively. The implications for HRD professionals is that there is a requirement to accept using technology for the benefit of the learner and the learning experience, as opposed to using the technology for the technology's sake, or indeed resisting the use of the technology. The most common denotation of eLearning is specifically use a small 'e' and large 'L' to indicate that the technology is there to support the learning. There is also merit in the argument that the 'e' in eLearning is not electronic learning but rather enhanced learning. This again relates back to the need for a blended solution, where there is a requirement for some traditional face-to-face contact. A key implication for a number of HRD professionals is to embrace the technology to enhance the learning experience as opposed to resisting or ignoring the technology.

Roffe (2004) argues that the emerging thinking on the applications of eLearning implies a shift in the importance of the research agenda, away from descriptions and applications of technology-based applications and towards methodologies on learner-centred approaches and critical analysis of eLearning that help the learning processes. Various questions posed by Roffe (2004) include: Are the methods suited to support the learning processes? Does the eLearning approach present a strong motivation to learn? Does the learning lead to the desired results? Is the content authentic for the learner?

The research conducted as part of this study has shown that there were some significant differences but more surprisingly there were also a number of similarities between the large organisations and Small and Medium Sized Enterprises and that there are a number of implications for HRD professionals.

Further research is necessary in order to fully understand eLearning issues in the large organisation sector and to compare and contrast with the SME sector. The authors are currently engaged in a project that is developing and deploying blended eLearning courseware in conjunction with a number of large high technology organisations. The material and various methodologies are also being transferred to small and medium enterprises. It is expected that the results of this project will be available in late 2006/early 2007.

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