



# Putting professional development online: integrating learning as productive activity

Professional  
development  
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## Abstract

**Purpose** – This paper aims to understand the situational appropriateness of adopting e-learning for the in-house company qualification, and more specifically to compare the benefits of studying online to more traditional way of studying with print material.

**Design/methodology/approach** – At the end of seven months study, final test results for company certification were collected and analyzed. Additionally, quantitative and qualitative data from the 59 employees' individual learning experiences were obtained to address the research questions.

**Findings** – The paper finds that the first year's experiences of using e-learning course were mostly positive. The results showed that participants learning online gained similar or slightly better learning outcomes than those who used the print material. Those learning online earned the certificate in less time in comparison with those studying the print version.

**Research limitations/implications** – The present study is limited by its small and potentially non-representative sample, representing those who voluntarily participated to work towards the in-house qualification.

**Practical implications** – The practical implications of the results include integrating e-learning into the real workplace environment. When enough attention is paid to the course design, e-learning provides good possibilities for effective use of employee time. The work has relevance for other corporate training providers considering incorporating e-learning into their professional development programs.

**Originality/value** – Not many companies who have moved traditionally delivered programs online, have been able to compare groups of employees who have studied from text-based material with those who have taken the online version. Two separate research processes implemented provided a unique opportunity to analyze work-based learning outcomes.

**Keywords** E-learning, Professional education, Learning methods, Learning organizations

**Paper type** Research paper

## Introduction

Globally, company approaches to internal professional development and learning are based on the evidence that continuous renewing of professional competence is a critical success factor for individuals and the company. Senge (1990), for example, has argued that the only enduring competitive advantage comes from the capacity for continuous deep learning. This includes issues such as the technologies used to maintain and transfer explicit knowledge, the availability of access to knowledge, and the ability to gather and construct new information (Appelbaum and Reichart, 1998). No doubt learning in companies can be fostered in various ways, e-learning being one tool.



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In today's rapidly evolving high technology environment a lot of corporate e-learning activity is taking place. These activities recognize the weighting placed on the cost effectiveness of the media and compelling administrative advantages of e-learning. More recently even more weighting is put on the instructional design benefits, such as consistent and uniform delivery across the organization, and flexible updating and studying possibilities (Cook and Heacock, 2003).

Nonetheless, concerns remain regarding the real organizational learning benefits of this often sizeable commitment in both money and staff effort. According to Reeves (2002) this is due, in most respects, to the limited evaluation of e-learning in most companies. Although vendors, instructional designers, and subject matter experts unanimously emphasize the importance of evaluation, there is lack of sound research material in the area of corporate e-learning. Does the learner receive a quality training experience and, more importantly, is this of a higher quality than other more conventional methods, such as the learning from print materials?

To gain a better insight into these issues, we draw attention chiefly to the "learning process" that one intends to foster to enhance one's skills and abilities in work. Beyond what the workplace affords, it is important to consider how individuals engage with what they experience in e-learning.

In the present study, we analyze the situational appropriateness of adopting e-learning for the in-house company qualification. More specifically, we compare the benefits of studying online to using the traditional print material. This is done with respect to the first year experiences of Valio, a large dairy products company based in Finland, offering e-learning as one option for employees' professional competence development.

The case company is interesting because there were employees studying the same material with the same objectives in both traditional and online mode in 2003. Not many companies who have moved traditionally-delivered programs online have been able to compare groups of employees who have studied from text-based material with those who have taken the online version or a mixture of online study and face-to-face sessions. The final test results (required after the seven months self-study) for company certification, together with the employees' own experiences, provided a unique opportunity to analyze work-based learning outcomes and consider the issues raised above.

### **Using online technologies for work-related learning**

Usage, and even mastery, of online tools, such as intranet, groupware, databases, and web search are requisites for performing an increasing number of tasks in the contemporary workplace (Bernárdez, 2003). No company can afford to lag behind its competitors in efficiently using the online technology available to improve processes, products, and services. Most corporate trainers are quick to recognize the importance of using technology in competence development, yet numerous barriers block many implementation efforts (Ertmer, 1999). These barriers range from employees' personal and technical fears ("How will I gain the confidence I need?", "How does this e-learning course work?") to organizational and pedagogical concerns ("Is this e-learning course pushing learning from work time into personal time?", "Can I find ample completion time and support during work hours?").

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Temporal flexibility is one of the most commonly desired potentials of e-learning. This flexibility promises a lot but it can also prove to be a burden. Many researchers have shown that one of the biggest challenges for e-learning success is finding enough time for studying (e.g. Murray, 2001), tutoring (Fox and MacKeogh, 2003; Hirumi, 2003) and individual and organizational time management (Littlejohn, 2002). How many employees have enough time to learn on company time? Is it reasonable from the employer to assume that the employees will study at home? Although e-learning provides new ways to increase flexibility regarding time and location, it does not exclude the fact that many people are not willing to spend more time than is needed to do their jobs in front of the screen.

Murray (2001) has reported that, e-learning, especially “in the work” can improve the capacity of employees to use technologies for job tasks. As they become more comfortable with using e-learning technologies, employees gain expertise and confidence in using technology in general. This is because they will use the same tools and technology for learning as they use for work. However, no matter how well the technology “works”, if the learning content is not relevant, e-learning will not succeed. Employees want to engage in learning that matters and is related to their work.

E-learners, on the other hand, not only need to develop computer literacy and self-directed learning abilities, but also must develop significant multi-tasking abilities to deal with all that and the demands of the regular work environment (Bernárdez, 2003). Thus, in the long run, a major influence on the quality of e-learning is how much and how well support resources and practices are included in, and form part of, the overall organizational culture (Hemmington, 1999).

### **Integration of learning and work**

In the context of professional development, training, learning and working are not separate activities. The integration of learning and working at all levels of activity within an organization is a way of improving the effectiveness in terms of practice as well as intellectual capacity of individuals, teams and the company’s business needs (Bryans *et al.*, 1998). This requires enculturation to work groups only available in authentic environments. From learning point of view, enculturation takes place through a process that Lave and Wenger (1991) have called legitimate peripheral participation. At the beginning of their working career, newcomers’ participation in an expert culture takes place on its periphery, and as their expertise develops, they gradually move towards the core of that expert culture. Learning, qualification, and ongoing training should be recognized as essential components of culture and development in enterprises. Collaboration and interaction between co-workers are essential for learning, including e-learning (Salomon and Perkins, 1998). As learning is an integrated and essential part of an expert culture (Scardamalia, 2004), all learned content is customized to meet particular workplace needs.

This poses challenges for educational design, especially when the learning organization does not have the distinctive competencies for e-learning course development. Individuals with knowledge of instructional design, technology, human resources and adult education – combined with an understanding of business needs – are in high demand. By subcontracting for certain aspects of content production, or developing partnerships or teams, the learning organization can gain the needed competencies to design and deliver relevant tailored content. Online learning also

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requires new and different skills from corporate support personnel (Williams, 2003). Especially subject matter experts who act as tutors often have little experience with using online technologies for workplace learning.

For real integration of learning in work processes, real data and real projects emerging from working life itself are necessary rather than examples and constructed case studies (Slotte and Tynjälä, 2003). Learners need to be stimulated to draw on authentic experiences, develop appropriate knowledge and practices and the ability to apply them as needed in future work (Eraut, 2004; Jonanssen and Rohrer-Murphy, 1999). This real content can be achieved by integrating the views of internal and external content suppliers and designers with a shared perspective of mutual collaboration (Watson *et al.*, 2004; Williams, 2000). Learners too can be involved in development work to increase the likelihood that the content matches the needs of their job practices (Murray, 2001). As more staff members engage in e-learning in various ways, they get to know concretely the possibilities learning technology can provide for them.

In summary, this literature review has focused on how learners view the e-learning experience, the importance of integrating the learning and work, and barriers to integration. The research reported in this article looks at how Valio addressed these issues in the first year of adopting e-learning, and specifically compares the benefits of studying online to using the traditional print material.

### Research methods

Quantitative and qualitative methods were used to generate data about the learning process and provide a comprehensive understanding of the corporate e-learning.

The choice of mixed method is appropriate to the subject under investigation. Psychological factors, such as attitude and motivation, are important to the concept of corporate learning. Therefore, the emphasis should not be limited to the learning outcomes – but focus also on gaining an understanding of how the subjects themselves view their own learning.

By combining the methodologies, we aim to achieve the situation where qualitative data can support and explicate the meaning of quantitative research (Greene *et al.*, 1989), the main emphasis being in the survey-based approach. This has pragmatic origins in terms of providing more objective data enabling a more objective analysis for Valio to develop their e-learning method. Other research introduces a further advantage of a mixed methodology research design, noting that it is important to collect data of the real learning performance by taking a “snapshot” of a learning situation at work, i.e. to measure variables at a specific moment in time (Eraut, 2004; Greene *et al.*, 1989).

The history of adoption of e-learning at Valio was elicited through discussions with key personnel in the company. One of the authors has been involved in the development of the e-learning content and can account for how the company has adopted certain moves. As a result of close co-operation, she had full access to all data about web forums as well as the opening and closing sessions.

Further data were produced from the 59 employees who gained the Valio Certificate in 2003. All the grades were gathered for the nine module tests together with the final certification test, for both the learners who studied for the qualification using the package of printed material ( $f = 22$ ) and those who studied using e-learning ( $f = 37$ ).

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The study material included the same content for both groups, although it was differently structured. Data about e-learners' individual experiences were generated using a web-based survey instrument with a Likert-type scoring scale where 1 = low and 5 = high for each factor. Immediately after the end of the program the learners were invited to respond to a list of questions (both open-ended and closed-ended items) about the content and design of the course, their study motivation, learning performance, the time they spent for studying and for preparing for the tests. The response rate was 71 percent (42/59). This study was limited by its small and potentially non-representative sample, representing those who voluntarily participated to work towards the in-house qualification.

In the next section, a short introduction to Valio and the aims of the e-learning course are presented. Then we recount the ways that Valio considered and decided on various issues regarding the e-learning option for the in-house qualification at Valio. The article proceeds with an analysis of the individual test results and survey responses. This leads into discussion of issues regarding e-learning for Valio and other companies considering e-learning.

### **The Valio Certificate**

The Valio Certificate is an internal qualification offered for employees. The Valio group comprises the parent company Valio Ltd and its subsidiaries in Russia, Estonia, Lithuania, Sweden, Belgium, Latvia and the USA. The Group employs 4,300 people including 380 who work outside Finland. The company is engaged in processing and marketing milk, dairy products and other food products. The product range totals about 1,000 items ([www.valio.fi](http://www.valio.fi) accessed 1 November 2004).

The internal company qualification at Valio has been designed to familiarize employees with the way Valio operates, what are the most important products and production sectors. It aims to increase employee motivation and satisfaction. By the time learners have covered the material they should have a clear understanding of:

- Valio Ltd – strategy, history and the way of working;
- overall view of the production;
- research and development;
- materials operations;
- domestic sales and marketing;
- Valio International; and
- importantly, where to get more information.

Studying for the qualification is recommended for all new employees after having worked in the company for some time. The qualification is optional and open for everyone willing to take it. The content is designed for seven months self-study.

### **The Valio Certificate goes online**

Valio in-house certification began in 1988 with the study material of a handbook and a pack of printed information. Putting the entire course online in 2002 was a viable option for Valio when considering the necessary redesign of the whole learning

package. An e-learning course was created in close co-operation between an external vendor and Valio company trainers.

In building the e-learning course, special attention was paid to the integration of learning with daily work processes at Valio, so the employees could learn knowledge and skills to be applied in future work. This was achieved, for example, by interviewing the subject matter experts, and by instructing them to take photos of various dairy production processes to be included in the e-learning course by professional graphic designers. A number of subject specialists who were responsible for creating the learning tasks and assessment were provided with the models of how to create essay tasks that require critical review of the content (e.g. the benefits of internal research activity) and comprehension of the main ideas (e.g. most common souring agents) described in the learning material.

Technically, the Valio Certificate e-learning materials utilize widely available web technologies to enhance and support the employees' learning processes. The interactive media elements consist of activating test questions, exercises, case examples, "drag and drop" matching exercises to enhance learner reflection, and jigsaw puzzles to construct sequences. Graphics are animated and interactive where appropriate, for example, to illustrate process flows. To enable learner self-assessment and to provide immediate feedback, a number of activities making use of programmed responses have been designed.

The 59 participants who voluntarily took the course were professional and technical employees, service and support employees, and managers working full-time in Valio. The learners had the option of the traditional print package or the new e-learning package. The study program started with face-to-face meetings to provide the employees the chance to meet the other learners and dispel employees' possible fears and doubts about e-learning. No significant differences were found between the employees who chose each study method. The average age of those taking e-learning course was 34 years and 33 years for conventional learners. The majority were women: 84 percent of the e-learners and 82 percent of the learners who took the print package.

The Valio learners predominantly study independently, within a framework of support and activities designed to encourage interaction with work colleagues and other learners. Asynchronous communication was facilitated through online discussion groups and via e-mail between individuals. The learner support framework combined online tutors (17 subject specialists) and in-company facilitator. The facilitator provided feedback and support for the learners as they required it. The tutors used e-mail to support both by e-learners and those studying with the print material. The latter group was offered the same support as e-learners except the asynchronous discussion forum. Typically, no additional qualifications were required for this tutor role.

The company certificate was divided into nine modules to be studied a module at a time. Each module contains the module test including essay tasks and multiple-choice questions. All tests were marked and graded by the in-house tutor responsible for the module content in question. The content scores varied from 0 to 10 for each assessment. Tutors' feedback to learners varied from mere grade to verbal explanation of the inaccurate answers. All module tests were online for e-learners and in paper format for those studying with the print material.

At the end of the total seven months of studying, all participants gathered together again for one workday to complete the company certification. The day included various types of program, such as R&D lecture, new product presentation, a visit the factory where the manager showed them around, and a final certification test. The test comprised three essay tasks chosen from the pool of four tasks. It was graded similarly to the module tests by a tutor responsible for the whole certification. The final company certification result is composed of the grades of nine module tests and a final test grades.

### Learners' experience and performance

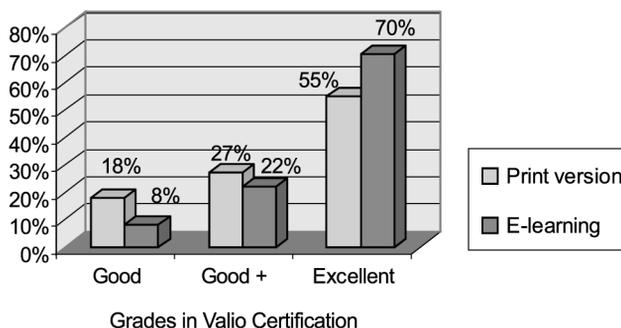
All participants reported being motivated to improve their understanding about their employer. This result was a pleasant surprise and it was consistent across the two semesters in 2003 with all learners, both those who used the printed packages (mean = 4.0) and those who used the online option (mean = 4.1).

Similarly, all learners, independent of the learning methods they used for studying, responded that their overall understanding of Valio had clarified and improved. In the words of an e-learner:

The online study program was very interesting and it provoked many new thoughts although I've already been in the company for a long time. My appreciation of my employer, the milk producers, increased an awful lot.

However, the employees who took the e-learning course rated their own learning slightly better (mean = 3.8) than those who studied in the more traditional way with print material (mean = 3.3). The same was found in the graded learning results of those who passed the certification with excellent grades, although the difference between the study methods was not statistically significant. Figure 1 uses a bar graph to compare final grades by chosen method of learning. It shows that slightly more e-learners received excellent final grades, whereas slightly more learners using the print package received good and good + .

In response to the open question what do you like about this e-learning course, three reasons stood out clearly: exercises and tests, convenience, and face-to-face meetings as part of the study program. A majority of the learners (82 percent) either strongly agreed or agreed that taking the tests during the seven months study time had provided them with new ideas for execution of professional duties. However, some



**Figure 1.**  
Final company  
certification results  
according to learning  
methods

suggestions were provided for improvements in activating exercises embedded into the e-learning course including the need for more clarity and more even difficulty level. Below are representative quotations from the e-learners:

The module tests in the course were good; they didn't only force me to learn but also enhanced my learning experience to some degree.

I liked to be able to learn at my own pace, yet within the explicit time limits. The course was also easy to use. I would have liked, however, to receive proper explanations for the correct answers for all tests; now there were only the grades in some test feedback.

The closing session at a whole, and especially the R&D lecture was inspiring. Meeting new Valio people and sharing ideas with them was great.

Almost everyone agreed that the opening and closing sessions were helpful. The short and pithy narration of the online content was also complemented. The visual material that helped the employees to extend their learning horizon to other operations in the organization was also frequently mentioned as being illustrative.

The e-learning course was developed to facilitate interaction between the learners and tutors. However, many employees appeared to be more concerned about completing the learning tests than exploring alternative solutions and negotiating multiple perspectives. When it came to the online discussion, the participation was quite disappointing. The availability of a discussion forum and an internal e-mail system did not seem to support learner interactions. Employee contribution to the online area remained nearly nonexistent. Altogether only a dozen messages were posted in the discussion area and most of them dealt with administrative issues.

At least one learner reflected on one's individual responsibility:

Maybe I should have plucked up my courage and just started using the discussion area as was suggested but the other learners seemed to be so distant and strange.

The learner evaluations showed that although the employees responded positively to the course in general, they did not experience e-learning without any problems. The following is excerpt from one e-learner:

Preparing for the final test was wearisome work because the material was so wide.

Another noted:

Sitting in front of the screen is hard, especially if you need to do it after working hours.

Learners also appreciated the opportunity to fit the course flexibly into the work schedule and this will be addressed in the next section.

#### *Making effective use of employee time*

At the same time while liking the convenience of taking the company certificate, many employees complained of the difficulty of finding enough time or silence for studying during their working day. An e-learner expressed her experience:

Studying required a surprising amount of time. I couldn't help it but I had to do the exercises and tests at home.

When comparing the results of e-learners and those of print material learners, we found that e-learners were getting the same results with less time.

E-learners reported spending in average seven hours per module whereas the corresponding amount of time among those studying and responding to learning tests with the print material was 9.6 hours ( $t(30) = 2.70, p < 0.5$ ). The range of the total time spent per module was 1-12 hours for e-learners and 1-16hours for print version learners. Figure 2 shows the detail results of the amount of time spent per a module during working hours and during leisure time.

Interestingly, e-learners not only used overall less time for studying but they managed to fit more of the study program into their work schedule than those who studied with the print package. Overall, e-learners used somewhat more time for studying during working hours than the paper version learners, and considerably less time studying outside the office than the paper version learners (respectively 4.3 hours versus 8.8 hours outside the office  $t(30) = 4.21, p < 0.01$ ).

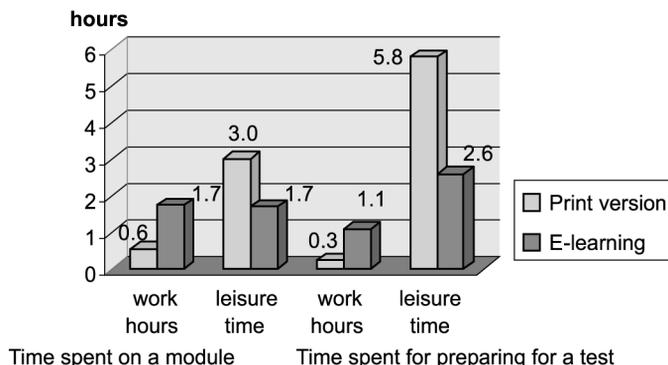
Yet, both e-learners and those with the print package reported that taking the company certification was convenient for them. The learners with the print version reported that it was flexible to carry the material from work to home and back. In that way, the print material was experienced as “anytime, anywhere learning”; the terms that are often related to e-learning. Correspondingly, a couple of the e-learners who did not have the possibility to print at home wanted to have that option so they could make notes on the study material.

### Discussion and implications

The program for the Valio Certificate reported here is designed and delivered to facilitate a process of learning to improve one’s knowledge and skills for their particular workplace setting. A major objective is to establish and maintain a competent work force by encouraging the employees’ professional development. In this regard, the course has been successful, as a majority of learners said their overall understanding of the company had clarified and improved. One learner summarized their experience of e-learning that shows a strengthening capacity for reflection about themselves and job requirements:

I had to think about every single learning task from the point of view of my own work. If you were not required to write [the answer to the task] you wouldn’t need to [reflect].

This improved capacity was, however, not only limited to the e-learners, as the other learners achieved equal mastery of the course objectives using the package of print



**Figure 2.**  
The amount of work hours  
and leisure time spent on  
studying for a module test

material compared to the e-learners. The reasons for no significant differences between results from the different study methods probably are due to the high motivation of all the learners. When a learner thinks that the learning material provides them with relevant knowledge and skills to do a better job, they probably engage in learning even from structurally less clear and visually poor material. Despite this – or perhaps because of it, it appeared that the print version learners used more time to get the same learning outcomes as e-learners. This reflects the importance of instructional design according to pedagogical assumptions with contextually bound activities and more manageable components (Jonanssen and Rohrer-Murphy, 1999).

While the Valio employees found the exercises and learning tasks supported their learning process, they were surprised how much time they would devote to the learning. The quantitative and qualitative evaluations of the company certification demonstrated that many employees preferred to do e-learning during working hours. E-learners were also more apt to do that in practice, so seemed more able to integrate the learning time with work time. Murray (2001) identified similar issues in her study on the use of e-learning in the workplace. She attributed the results to the fact that many learners do not want the online training time to disrupt their personal life, as today's workforce is always striving to maintain a good work-life balance. Therefore, employers that provide their training during work hours will find they have a more satisfied workforce.

In promoting e-learning the employer should provide information to its employees about the time needed to complete online company certification and about learning styles most conducive on online learning. This requires that human resources development policies value these activities and focus on building capacity to respond to educational innovation and developing expertise in terms of staff development (Slotte *et al.*, 2004). In-house tutors and a facilitator need to share this information with learners when marketing the study program and during the launch.

Consideration should be also given to whether the study program should be “only” available online. As was shown, the Valio learners wanted the option to print some parts of the learning material for later review and note-taking purposes. Elaborating on the learning material as well as explaining concepts and procedures to oneself and possibly to others has a strong positive effect on work-based learning (Marsick and Watkins, 1990; Salomon and Perkins, 1998). According to Scardamalia (2004) this is based on encouragement to develop and display their depth of knowledge, organizational skills and reflective insights, thereby promoting competence in exploring new ideas and concepts.

Many employees appeared to be more concerned about completing the learning tests than exploring alternative solutions and negotiating multiple perspectives. The learners explain the inactivity on the web forum and little public discussion between participants by the lack of support from the in-house tutors. Challenges to the tutors included the need to build an online community, the time commitment for the study program, and the need to facilitate communication among all participants. These communication challenges were addressed partially, while providing possibilities for human interactions in the more traditional opening and closing sessions. The trend toward blended learning was thus being fed by employee support. To further support the teamwork and networking activities in learning, Valio has successfully used group tests in assessing the outcomes.

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The Valio tutor members involved in this course also learned that creating learning tasks that measure deep-level learning requires more than considering what is important to be learned. They learned that they should provide the learners a marking scheme for essay tasks, broken down to show the allocated marks for each assessment. According to Murray (2001), effective vehicles for developing the capability of e-learning tutors include formal accredited programs, peer observation schemes, and opportunities to gain e-tutoring experience to support teaching development projects. Valio could make more efforts in this area.

Another measure that proved to be useful for the whole company was involving employees in propriety and process-specific content development. This helped integrate the program with the organizational culture. The wide range of photos about various milk and other dairy production processes, taken by Valio subject specialists, provided valuable learning material. Not only that, but also the course development process produced unique documentation of Valio operations very useful for other corporate departments, such as marketing and information services.

### **Conclusions for corporate e-learning**

These experiences of adopting e-learning provide several lessons that Valio can build on and that may be useful to other companies considering e-learning. First, when learners are highly motivated for pursuing certification, e-learning is by no means less effective than packages of printed material, but it is not necessarily much more effective. A lot depends on instructional design, and the direct relevance of the instructional material to the learner. There is still much to be discovered about how people learn at work using different technologies, particularly in relation to interactivity, and how materials can be developed and structured to enable all learners to make effective use of them.

Second, when enough attention is paid to the course design, e-learning provides good possibilities for effective use of employee time. However, these possibilities need clear support in terms of setting expectations regarding time to be used, and tutorial support. With regard to workplace learning, time for learning is of special interest because learning is not generally considered the main activity for which the employees are paid. They are employed to contribute to competitive advantage and to generate profits requiring the companies to overcome, in one way or other, the challenge of time.

Third, while companies can view e-learning as an efficient means for educating employees, the context in which this learning is offered must be carefully considered and managed. Effective content is among the greatest challenges facing any e-learning initiative. If the content does not teach, it has no value, regardless of how “high-tech” or cost-effective it might be.

The Valio experience is consistent with several other studies which have shown that learning should occur with and through work rather than separately (Appelbaum and Gallagher, 2000; Eraut, 2004; Lave and Wenger, 1991). Valio was able to coordinate and integrate work with different professionals on course design and contents resulting in a successful e-learning solution. Although companies generally have plenty of expertise in various fields, many can benefit from a more profound understanding of the possibilities information and communication technology can provide for their learning and business needs (e.g. Slotte and Tynjälä, 2005). This requires often partnering with other businesses and educators to share expertise (Murray, 2001).

The development of a corporate e-learning course requires considerable time and distinctive competencies, and perhaps even more importantly, the ability to communicate and create mutual understanding with other professions and interest groups. For example, human resource development professionals, sales people, subject specialists, pedagogical and technical experts are looking at the matter from different viewpoints. It is not always clear that they emphasize and share equal objectives for e-learning. Closely related to this, remember that when the best practices are taken from one organization and transferred to another organization according to somebody's interpretations, the results may vary. It is very difficult to copy and implement ways of functioning from one context to another.

Thus, for e-learning to be successful, the learning culture must get beyond providing different kinds of training courses to recognize learning as valued part of what people do – productive activity (Hemmington, 1999). An essential part of this is to increase the general awareness of how learning takes place; how it is related to the organization's strategy, learning community, and what are the features that make professional development meet the learning needs and the business needs. As the results of this study showed e-learning offers no clear answer to continuous learning needs, but it offers fruitful possibilities and new insights into professional development.

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