European Enlargement-Challenges for
eLearning and Knowledge Management within SMEs

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Abstract
This paper presents some aspects for the development of eLearning business models for SMEs. eLearning trough its flexibility and facility is to be seen as a chance for SMEs to manage their knowledge and to improve their business.

Keywords
eLearning, knowledge, SME, training models

1   Introductive aspects

The current enlargement process constitutes an evolutionary step for the European Union and it will continue to do so in the years ahead; it alters economic as well as social and cultural environments. In the following we resume only to small and medium-sized enterprises (SMEs). They are important to employment in the EU (99.8% of all European enterprises are SMEs and in 2003 they provided employment for almost 140 million people –
europa.eu.int/comm/enterprise/enterprise_policy/analysis/doc/smes_observatory_2003_report6_en.pdf).
One important aspect that has to be considered is that the enlargement process requires a growing economic role of knowledge. Knowledge in fact is an element which is becoming more and more indispensable in order to respond to the demands coming from the contexts that are both general and specific to the enlargement process. So the growing dynamics and complex levels of the contexts lead to the reduction in the life cycle of acquired knowledge and competencies. It requires renovations both for individual and organisations, staff qualifying and/or re-training as well as increasing mobility of employees working in sectors affected by enlargement in order to adapt to the new working and business environments. Furthermore, the integration of a lifelong learning culture and of knowledge management in the culture of SMEs is essential in order to fulfil enlargement requirements.

Developed in the context of reaching a major strategic Lisbon goal for the Union to be "capable of sustainable economic growth with more and better jobs and greater social cohesion" the eLearning initiative seeks to mobilise educational and cultural communities, as well as social and economic players, to support the process of enlargement. eLearning could make a key contribution to the enlargement process for example by embedding an European dimension in education. New learning models are to be developed, fostering autonomy, flexibility, decompartmentalisation of subject areas, establishing contacts between centres of culture and knowledge from the enlarged Europe and facilitating access by all citizens to the resources of the knowledge based society. An integrated Europe could benefit from solutions which support the even more active modernisation of the continent.
eLearning through its flexibility and facility of access is seen as an enabler of lifelong learning having the potential to transform how and when employees learn to satisfy their work and life needs, as a catalyst of change and integration. It is to be seen as a chance for SMEs to improve their business and to integrate into the European market, too.

Research carried out in different European and national projects shows that there is not much eLearning going on SMEs and most of the few activities are of rather poor quality referring knowledge management. Most of the described aspects are results of the research work and discussions with experts carried out in the context of the European project ARIEL – Analysing and Reporting the Implementation of eLearning in Europe, a project within the eLearning initiative - (www.ariel-eu.net).

One possible solution presented in this paper is to involve SMEs in sharing knowledge and in collaboration and to develop business-oriented models of staff training for their tasks. As an example are the models which are going to be developed in the current European project SIMPEL will be presented in this paper.

2   eLearning, knowledge management and the enlargement process

It is known that the required amount and update speed of knowledge has increased in all organisations. Today enterprises, independent of their size, are confronted with a market in which "knowledge" has become one of the main production factors, next to "capital" and "labour". As one consequence the existing vocational training programmes need to be adapted and improved in most organisations. In this context the critical role of digital technologies in shifting vocational training from "just-in-case" to "just-in-time" to fulfil training requirements is undisputed. The use of such technologies is supported by the fact that today's learners, especially younger ones, expect to use computers for different scopes including eLearning.

European enlargement means challenges for eLearning because eLearning could bring important contributions to the enlargement process and, vice versa, this process can support eLearning. Some of these possibilities are shortly discussed in what follows.

eLearning allows all the Europeans to develop a type of learning which goes beyond their frontiers and gives the occasion to introduce new concepts of cooperation in the field of education or culture. Thanks to the eLearning initiative there is an increasing development of partnerships among the various participants in education, training and research as well as between the public and private sector.

The definition and implementation of an industry standard architectural framework for ICT software and transport services that supports eLearning systems (and their open standards) could ensure an interoperability of educational eLearning environments in the whole Europe.

In an enlarged Europe without barriers, models of good practices, for example, in developing regions and remote learning areas, could be disseminated more easily by combining new mobility facilities with eLearning practices. In this context also the understanding of "worst case scenarios" for different problems in connection with enlargement for example the evolution of education in enlarged Europe should be considered.

A greater effectiveness in the continual development of workforces for the integrated Europe and cost benefits could be achieved by the use of eLearning, particularly in new members and candidate states having critical logistic problems.

An optimisation of eLearning and knowledge management structures and the integration of communication networks in Europe (via particular interfaces) serve not only to the implementation of the Lisbon strategy but also support the modernisation of the European management to become one of the most modern management in the world. This is an indispensable precondition for a prosperous economy and policy but is subject of fluctuations and can be full field by life long learning. Civil servants from the enlarged Europe could be qualified by using eLearning for cross-border aspects for example in the area of crime combat, environment protection, particular eContent and connectable infrastructures of public management. These aspects are important in particular in view of the European enlargement.

3   Problems of eLearning and knowledge usage in European SMEs: Obstacles and Solutions

It can be observed that very little information could be found about eLearning in European SMEs. The structure of vocational training for SMEs is very heterogeneous in all European countries and many documents are written only in the respective national language. Some of the member states such as Finland, Estonia, Ireland or Denmark can be considered as pioneers in the field of eLearning. But, generally, eLearning takes place within big companies there is little activity going on in SMEs related to eLearning (HAMBURG et al., 2005) excepting ICT.

The most significant key factors negatively impacting eLearning and knowledge development in SMEs identified in various studies are:

- Training culture within the SMEs - often this is dependent on trainer and conventional training methods; skills needed for a more independent approach and the use of new media for learning are missing.
- Lack of appropriate software and contents - the major part of commercial eLearning software is modelled on the requirements of big enterprise or higher education. Software development is mostly centered on big inclusive eLearning platforms, usually consisting of a basic product and additional modules, which is costly and technologically demanding to install and maintain. Tailor-made contents are expensive, standardised contents largely inappropriate for SMEs.
- The attitude of managers – they often have not enough knowledge or are not convinced of the effectiveness of eLearning, instead they put their trust in classroom-based training.
- Lack of time and lack of access to sufficient bandwidth to ensure high quality training, especially user-friendly tools and quality content. SMEs do not have the time nor the resources to solve technical problems or learn sophisticated user helps.
- The availability and access to ICT. This is a key barrier in sectors with a low level of computer penetration. Many computers in the workplace are not linked to the Internet.
- Lack about knowledge flows in the company corresponding to its business and staff work tasks.
- Lack of immediate context of applying the learning for example by incorporating and scaffolding new learning with a personal knowledge schema.
- Lack of elements of knowledge management to characterize the company management.
- Lack of knowledge of agreements and associationisms that could be useful both as regards resisting the power of intermediaries and large competitors as well as adopting policies of communication.

When a company plans on introducing new ICT media for learning it has to decide to follow one of the following strategies:

A) The strategy of **minimal change**: introducing of new media and training concepts should involve only minimal changes in the structures and processes of the company. Through a latent implementation the acceptance of the new media by trainers will be assured and the staff is automatically introduced to the new tools and learning methods.

B) In contrast to the minimal change strategy **active change** includes a review of the organisation, its infrastructure, learning culture and business strategy as appropriate to the new learning objectives, concepts and methods.

Formore efficiency, strategy B should be followed. For reasons of acceptance often the starting point is, however, strategy A. Actors concerned with the introduction of eLearning ought to be conscious of the fact that the minimal change approach may be suitable as long as eLearning is seen as a first experiment. As soon as a serious commitment is made to eLearning any conception has to rest on active change, i.e. wholistic approach as explained in the next section.

Kerres (2001) identifies four fields of activities, in order to achieve the systematic integration of media activities into the vocational training in a company:

1.   **Infrastructure:** Hard- und Software and the establishment of corresponding services (Maintenance, Update) for the organisation, e.g. ICT equipment, basic ICT competences of staff, providing technical and competence support, etc.

2.   **Development:** Human and material resources as well as organisational conditions for the efficient use of media.

3.   **Media:** Production and distribution of digital learning contents which is engaging the learners into the learning process by using didactically sound and appropriate elements of interaction and multimedia.

4.   **Didactics:** Replacement of old teaching and learning methods with new approaches, (e.g. social constructionism, trainer as facilitator/moderator, group and project work, learner-centeredness, competence development/acknowledgement of competences).

In addition to these four interrelated elements, each SME and SME sector has to include in their consideration the issues of formal and informal qualification and the issue of quality assurance of the eLearning used. In general, there is much sympathy in SMEs and among SME employees for informal approaches of learning and this tends to get reinforced when eLearning is adopted. But both sides of training and learning have to be considered in strategies and practices to achieve sustainability and long-term impacts.
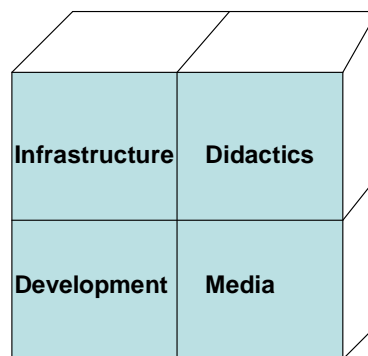

Figure 1: The magic square of media-didactic innovation (Kerres 2001).

The following steps are necessary in a strategy for implementing eLearning, if it is going to be sustainable:

1. **Identification of needs and objectives of training:** While this is a truism for most training practitioners, SMEs very often hit their first serious barrier already here: Many SMEs do not have a Human Resource Department or a training expert to identify exactly the skills of the employees corresponding to the business objectives of the company. A need for training is often recognised only when a particular problem arises. So the owner of the SMEs should be helped to do this analysis in the wider context of business aims and longer term business planning, before the training process begins.

2. **Engaging Employees:** The literature suggests there are many barriers to employees undertaking eLearning. Where eLearning is linked very closely to day-to-day tasks, this is more successful.

3. **Time factors and Form of training used:** SMEs staffs are often guided by the daily business pressure and devote little time to learning activities. So they prefer informal forms of the learning taking place often on the job through sharing experience with colleagues about the job tasks.

4. **Courses/Learning Content:** The most important subject for training courses in SMEs should be the "core business" of the company and should refer to the competencies the staff need for their work tasks. Other subjects should be norms and procedures helping SMEs to survive/integrate into the market. But also management skills, accounting and language skills are important to be learned.

5. **Tutor support for eLearning and integration of it with more traditional forms of learning:** The evidence suggests that the learning experience is better and completion rates are greater where there is tutor support either face to face, on-line or over the telephone.
6. **Learning infrastructures:** space, time, clime, etc to support eLearning
7. **Organisational perspective, transfer of knowledge:** community of practice, learning groups, partnerships supported by learning platforms and special connections have to be developed in order to strengthen dialogical transfer**.**
8. **Economical aspects:** a business part of the model should represent economical aspects of the eLearning strategy
9. **Quality and Evaluation/self evaluation criteria:** Quality criteria have to be established. Evaluation tools for efficiency and results of the training efforts should be developed that can be easily handled because SMEs lack staff and know-how and do seldom some evaluation.

4   eLearning Models for SMEs

An eLearning model for a company describes the eLearning strategy of the company (Hadzhieva 2007). Successful training models for SMEs are based on a coherent, harmonious concept including organisational, social, economical and technical aspects and describe the training strategy of the company.

Sustainability e.g. medium- and long-term profit maximization of an learning model should be defined consistently. Some aspects to be considered for the consistency of a learning model are the following:

- Target group from the eLearning program have to be adequately;
- The eLearning strategy and the planned investments to realize it should aim on long-term or medium-term generation;
- Costs have to be concentrating on core activities in order to be not very high;
- The eLearning system should be adaptive and scalable.

SIMPEL is a current European project financed under the European eLearning initiative. In seminars with managers of SMEs in all project partner countries (Germany, The Netherlands, Hungary, Ireland, Italy) we will build a community of practice for business-oriented models of eLearning. The objective of this community is to promote models of good practice and to attract staff who are engaged in support, training, design/development, use, consulting and policy formulation concerning eLearning in SMEs in the European Union, starting with the countries, where SIMPEL partners are active (http://www.simpel-net.eu).

5   Conclusions

In order to work efficiently in new upcoming contexts like European integration, SMEs are required resources and training for achieving business competence. It is important, however, to improve knowledge management processes and to design effective models and lines of intervention to help them to build participative suitable models of training.

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