SME'S, *E*-LEARNING AND COMMUNITIES OF PRACTICE

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Abstract - E-learning, being a suitable modern way of education for use in small and medium sized enterprises is however for various reasons not commonly used for training practices. A solution to make technology enhanced learning better available or of more use in SME's could be to form communities of practice with contacts, knowledge and information exchange over the Internet, applying best practices and developing business-oriented models of e-learning. Currently an EU project is on its way to build with SME-managers in the partner countries a community of practice for developing sustainable training strategies and models by using e-Learning. This project, called SIMPEL, is presented the way it makes use of the open source learning environment Moodle to build that community of practice.

Keywords: e-Learning, SME's, open source learning environments, Moodle, constructivism, communities of practice

1. European SME's and e-Learning

International social and economic changes like globalisation, market competition, technological innovation and the enlargement of the European Union affect the situation of small and medium-sized companies (SME's) in Europe. SME's have problems with their activities in production and their export-strategies, which do not seem to be adequate anymore, in order to stay competitive in international markets (Gregori, 2006). Moreover, they have difficulties to manage knowledge acquisition and maintenance, have no insufficient knowledge about European rules and regulations (particularly in the new member states) and about policies of communication and cooperation. Many examples of these, and efforts to obtain improvements, are amongst others also given by UEAPME – the European Association of Craft Small and Medium-sized Enterprises (www.ueapme.com).

Also, the use of new information and communication technologies (ICT) for sharing and creating professional knowledge and for developing (updating) innovative skills is unsatisfactory in many SME's. All these aspects require suitable and sustainable training policies and measures for their improvement. Scenarios and training models based on electronic media like e-Learning will help SME's to meet their needs adequately. They can be oriented to their specific business and are easy to integrate into their work processes.

Research carried out in different European and national projects, such as ARIEL, coordinated by the first mentioned author (see: www.ariel-eu.net) shows that e-Learning is still used mainly in big companies. Excepting the IT- and some few other sectors, there is not much e-Learning applied in SME's and most of the few activities are of rather poor quality (Attwell, 2003; Beer, et al., 2006) so far.

The European Commission and almost all European Member States provide support in some form or other to the fostering of e-Learning in SME's, but in many countries education and training are fragmented with responsibilities in different policy areas and agencies. Often some agencies are only responsible for providing business support and consultancy for SME's while others deal exclusively with the development of education and training. As a result there is a lack of integrated support services for SME's, in which learning, and in particular e-Learning, is a key component in the portfolio.

Another problem is the poor quality of e-Learning, practiced in SME's. At one hand, learning contents are mostly standardised courses without much interactivity and engagement of the learners. At the other hand, most e-Learning developments have been focussing on the technologies of Learning Management Systems (LMS) and Virtual Learning Environments (VLE), which are in the way they have been developed usually inadequate for small organisations. Commercial LMS are costly, difficult to handle and to maintain; they have made little impact within SME's and are not sustainable.

At present most European SME's act alone in facing their training problems. For future development it is necessary to strengthen cooperation with other SME's, with large enterprises, with training providers and public institutions (e.g. Chambers of Commerce). In this context, it seems to be a probably successful suitable solution for SME's to build communities of practice to share knowledge, to apply best practices in technology-enhanced learning and to develop business-oriented models of e-Learning. Such forms of co-operation would stimulate new experiments, new actions and new directions for learning, and especially the kind of informal learning most SME's have already experience with in-company apprenticeships or by introducing new employees to the shop-floor or practical demonstrations or instructions of new equipment.

New developments in information and communication technologies (ICT) support the improvement and networking of centres for acquiring knowledge by interconnecting virtual spaces and campuses, the networking of universities, training centres and cultural resource centres. This social and technical networking favours exchange of experience, of good practices in education and further education and improve these processes in many European countries.

e-Learning should be conceived of as a fundamental social process. The new digital generation is a communicative generation connected via SMS, e-mail and Internet chats. A lot of informal learning happens within social networks. Tacit knowledge is exchanged spontaneously within so-called "communities of practice" between participants with different expertise.
Interesting research referring to this last aspect has been undertaken in the field of organisational learning (Atwell, 2003), in attempts to explain how personal knowledge and skills become shared in communities of practice or organisations and how new knowledge is developed. Nonaka and Konno (1998) have described a knowledge development cycle showing how tacit or implicit knowledge can be made explicit as a part of learning processes. This work among others have pointed out, that knowledge developed in communities of practice is important for understanding that there are different types of knowledge and that knowledge can be developed in different contexts. These distinctions are important to analyse learning forms and knowledge development processes in SME's.

Communities of practice need a well established internet environment to be operative successfully. A suitable virtual open source learning environment like Moodle that is built on a social constructivist approach - according to Martin Dougiamas, the developer of the system - can support the development of communities of practice (Dougiamas, 2006).

In this paper after a short description of communities of practice an example is given in the current European project SIMPEL, in which the authors coordinate/participate.

2. Communities of practice

"Communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavour." (Wenger 2004)

They trace their roots to constructivism (Palloff, et al., 1999) involving open-ended questions, learning in social and physical contexts of real-world problems, using collaboration. and cognitive tools.

A community of practice is characterised by:

- a shared domain of interest of its members, their commitment to this domain and a shared competence that distinguishes members from other people,
- the community means members interact around common actions and ideas,
- practice means members of a community are practitioners with different levels of expertise and they develop a shared repertoire of resources.

A growing number of associations are seeking such ways to focus on learning through reflection on practice because they need to offer high-value learning activities.

Communities of practice are voluntary and so they have to create interactions that make them alive, attractive and engaging for members. New technologies like the Internet extend the interactions within communities of practices beyond geographical limitations and make possible the building of virtual ones.

There are several good reasons to look closer at suitable open source software, i.e. the possibility for adaptation of the system to support communities of practice. "Moodle is a software package for producing internet-based courses. It's an ongoing development project designed to support a social constructionist framework of education", says its developer Martin Dougiamas (2006). Tools accessible in the system like forums, chat rooms, a dialogue tool, polls, wiki's, glossaries, quizzes a workshop tool etc. aim at supporting collaboration, activities and social construction of knowledge. The current Web-based technology (Web 2.0) which is not only a technical revolution but first of all a social one, has a vast potential to create prospering environments for emerging communities of practice. Social software lends itself very well for support of activities within a community and for staff of SME's to collaborate. It is based on the idea of distributed networks of people, content and services that are adaptable and responsive to very specific and often changing needs and goals of SME's.

The very lack of face-to-face contact, usually a factor of success in education and communication, within a virtual community of practice can often be an advantage, because it helps to suppress traditional group norm behaviour. On the other hand, it remains an open question, if a community of practice, where face-to-face contact is entirely excluded, can be sustained over a long period. In our project we are going to support both virtual and face-to-face contacts within the communities of practice to be developed.

Despite the great potential however, there are also limitations of the current technologies in relation to virtual communities of practice: because virtual community infrastructure can be set up across cultures via www, these cultural and language differences can hinder the desired fluidity of activities in communities of practice (Johnson, 2001).

In the following section we present our current European project, called SIMPEL – <u>S</u>ME's <u>IMP</u>roving <u>E-L</u>earning Practices, where communities of practice and business-oriented models of e-Learning are under development.

3. SIMPEL–SME's: Improving Practices of e-Learning

SIMPEL is a current European project financed under the European e-Learning initiative. In seminars with managers of SME's in all project partner countries (Germany, Hungary, Ireland, Italy, The Netherlands) we will build a community of practice for developing sustainable training strategies and models by using e-Learning.

The objective of this community is also to promote models of good practice and to attract staff who are engaged in support, training, design/development, use, consulting and policy formulation concerning e-Learning in SME's in the European Union, starting with the countries, where SIMPEL partners are active (http://www.simpel-net.eu).

The community will provide professional support for SME's in using e-Learning and e-competence development. Access to documents and discussions are supported by a Moodle-based platform because of the accessibility and flexibility of this tool (Fig.1).
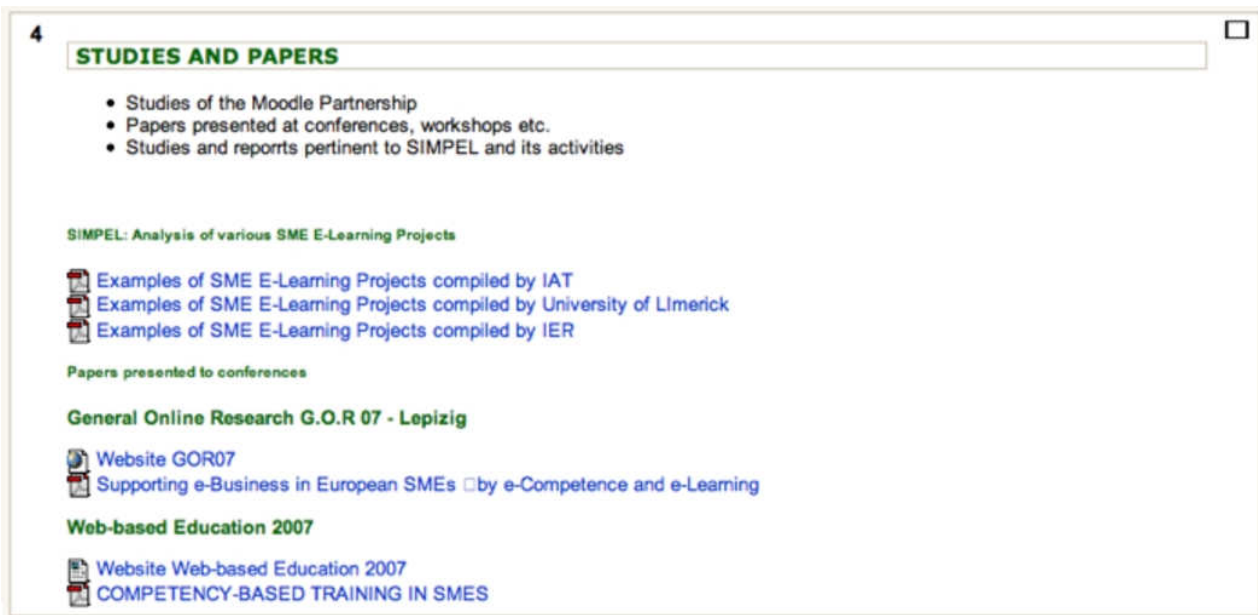

Fig.1. Studies and Papers of the Community of Practice in Moodle

There will be continuous efforts to disseminate the results of SIMPEL to other European countries which are not project partners.

One aspect of key importance is to put a premium on the didactic value of the e-Learning selected for support, valorisation and, hence, recommendation to SME's. It is no longer acceptable to bore learners with PowerPoint presentations or digital versions of print materials. To engage learners, learning ought to be provided in interactive "live formats" with an emphasis on discussion and collaboration.

Interactive scenarios (Schoemaker, 1991) that have been used successfully in other projects (i.e. in ARIEL) will help to develop models of communities of practice and business-oriented models of training. Especially scenario planning is a powerful tool to aid people, or groups of people and organisations in decision-making, even in conditions of uncertainty, thus supplementing traditional prognosis methods. A growing number of corporate executives are using scenario planning in this manner. Scenario planning derives from the observation that, given the impossibility of knowing precisely how the future will develop, a good decision or strategy to adopt is one, that plays out well

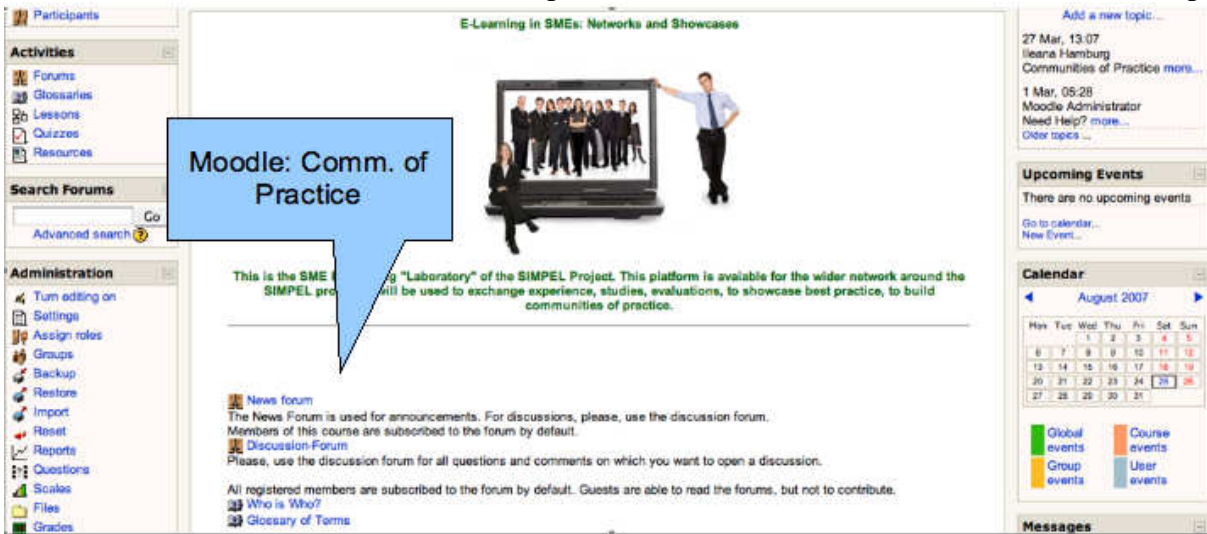across   several   possible   future   developments.

Fig. 2. Moodle Space for the Community of Practice

Another important aspect of implementing e-learning and its acceptance by employees is its integration in a wider strategy of developing e-competence, such as provision of sufficient support and technical know-how, relating e-Learning to existing competences and required competences (e-portfolios) (Hamburg, et al., 2007).

Important European projects concerning competence portfolios are the EuroPass, see http://europass.cedefop.europass.eu/europass/preview.action?locale_id=1 and the EIfeL network, http://www.eife-l.org/.

Models developed using these methods and approaches by the project team with the managers of SME's will be discussed in extended workshops with staff of SME's in all partner countries. As a result from these processes, validated models of e-Learning and guidelines for their implementation will be advocated throughout Europe by working with relevant networks, associations, consultants, policy-makers etc.

In looking for a suitable platform to foster the building of our community of practice and to facilitate the processes of scenario- and model-building, the SIMPEL consortium decided on Moodle.
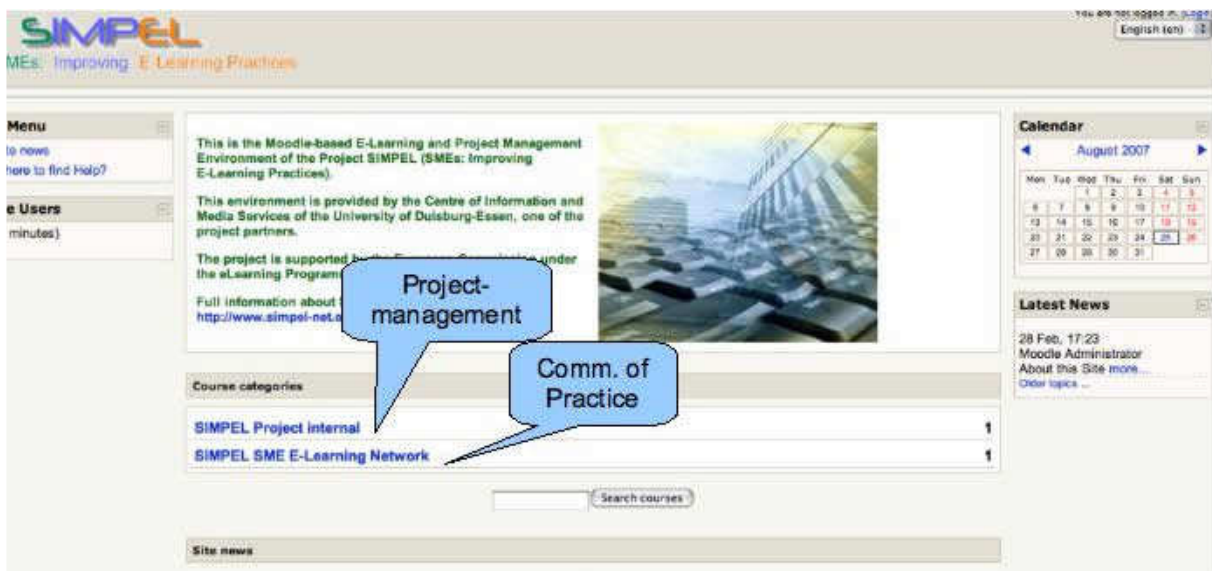

Fig. 3. Using Moodle for SIMPEL

Moodle encourages collaborative work also by providing a differentiated group mode and the ability to network course leaders/trainers. In addition, the platform is extremely flexible and easy to use for beginners. At the same time, it is "scaleable" to accommodate complex learning and teaching scenarios. The market is paying its tribute to these advantages: Moodle is presently the fastest growing open Source LMS worldwide and it even has found entry in the world of SME's (Busse, et al., 2007; Scherkl, 2005).

Examples include: Moodle in the Makeup Industry:

http://learningenvironment.alteredperceptions.org.uk; Moodle courses for the cleaning business: http://www.hma-university.com/; Moodle in the training hotel owners/managers: http://pce-savignac.com/moodle/index.php; IT and marketing courses:

http://formazione.netcomsrl.com/moodle/

4. Conclusion

The SIMPEL consortium, in looking for a suitable learning environment to foster the building of a community of practice and to facilitate the processes of scenario- and model-building to meet the training needs and knowledge exchange in SME's, has so far made a good experience with its choice for MOODLE. It is expected that creating communities of practice will engage learners by its emphasis on discussion and collaboration. Furthermore can the demonstration of such a community of practice help to convince SME ceo's and managers that e-learning is a good way to meet the training needs in their companies at less costs for technology enhanced learning than is usually thought of at present.

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