INSTANT LEARNING ON DEMAND AND COMMUNITIES

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Abstract

In order to cope with many requirements and changes of the labor market, beside a good organized labor market policy, flexibility and fast improving measures in the education programs are necessary. They should also include instant learning on demand by using eLearning, and new IT media embedded into work processes, responding to requirements of work/career situations as well as employees interests and supporting collaboration, knowledge sharing and performance support. Within vocational and continuing education, training on demand should be a good alternative for new staff or some categories of staff like IT professionals being asked to do new work or more work in less time, keeping up with progressing technologies. IT professionals are frequently interrupted during their training with emergency calls to be solved and are often overworked. Communities, where individuals share a domain of interest and knowledge about which they communicate and learn via formal or informal methods in order to solve problems are proper environments for instant learning on demand. Instant learning in communities means the acquisition of knowledge and skills as fast as they are taught or demonstrated to the communities participants – instantly.

In this paper, first examples of fields and activities which could be supported by instant learning on demand based on eLearning and Web 2.0 are presented. Communities oriented to instant learning on demand and examples of projects aimed also at building communities and strategies for instant learning on demand for small and middle sized enterprises (SMEs) are given. Some conclusions are also presented.

Key words: *communities, eLearning, instant learning on demand, social media, Web 2.0.*

Introduction

The requirements in the working life and particularly in the learned professions increase: more knowledge is necessary as well as flexibility referring to a fast familiarization with new working environments.

In this context, training „in advance", in large units and/or separate from work become more insufficient/obsolete and Lifelong learning (LLL) plays an important role (Beer et al, 2008).

Through increasing requirements for the companies the requirements for the staff also become higher but companies and associations reclaim big deficits of education and particularly in vocational and continuing education.

The long time socio economic development mediated by the economic crisis boosts the flexibility of the labor market, requires more knowledge work and pushes "patchwork" careers. Their number increases particularly in some professional sectors.

In order to cope with such requirements and changes of the labor market, beside a good organized labor market policy, flexibility and fast improving measures in the education programs are necessary. They should also include instant learning on demand by using eLearning, and new information technologies (IT) and media and embedded into work processes, responding to requirements of work/career situations as well as employees interests and supporting collaboration, knowledge sharing and performance support (Schmidt, 2008).

eLearning is an important tool that can support knowledge development and empowering people with the skills and knowledge needed to turn change to an advantage. Learning by using eLearning 2.0 (Hamburg, 2010), which is based on Web 2.0 (O´Reilly, 2005) focusing on community and social interactions, has the potential to support sharing, development and transfer of individual and organizational knowledge through interactive methods of online delivery of information, collaborative procedures, targeted training and through blending of eLearning with other education methods.

Social media based on Web 2.0 services i.e. media for social interaction offer the premises for a fast knowledge acquisition and support transforming learning in a continuous „lifelong process". Andreas Kaplan and Michael Haenlein (2009) define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content."

Communities where individuals share a domain of interest and knowledge about which they communicate and learn on demand to increase their knowledge via formal or informal methods in order to solve problems. are proper environments for instant learning on demand.

In this paper, examples of fields and activities which could be supported by instant learning on demand based on eLearning and Web 2.0 are given. Then communities oriented to instant learning on demand, examples from projects coordinated by the author and conclusions are given.

Instant Learning on Demand

In the last years, learning on demand particularly at the work place was discussed by some authors (Straub, 2005; Cross & Driscoll, 2005; Schmidt, 2008).

Within vocational and continuing education, training on demand should be a good alternative for new staff or some categories of staff like IT professionals being asked to do new work or more work in less time, keeping up with technologies that are progressing. IT professionals are frequently interrupted during their training with emergency calls to be solved and are often overworked.

On demand training sessions are often a much better solution for these kinds of business environments. Learners can access necessary educational information on demand, at a time that suits their schedule. The flexibility of on demand learning units enables learners to better engage in the material and ensures that the learners can build their "needed knowledge" completely from beginning to end through the learning unit. It is important that information can be absorbed at the speed of thought, if it is thought or demonstrated, instantly.

Results about fields which could be supported by instant, on demand learning in in companies taking into consideration both the competences and motivation of the staff and their work tasks:

- Knowledge management oriented to business processes (Abecker, 2004). It takes into consideration the importance of the process knowledge for the delivery, creation, sharing and storage of knowledge.
- Just-in-time information retrieval (Rhodes, 2000) is similar to the first but it does not particularly focus on business situation.
- Macro adaptive learning approaches (Woelk & Agarwal, 2002; Davis, 2003) adapt to the learners competencies referring delivery. Only static elements of the context are considered not considering the integration of working and learning processes.
- Micro adaptive learning (Park, 2004) focus on the behavior of learning objects, their properties and their adapting to the learners. The work context is not very important.
- Context steered learning (Schmidt, 2008) where learners get contextualized

recommendations of learning opportunities. This approach uses experiences in eLearning and in behavior research and tries to lower the barriers to learning activities and to avoid frustration of learners due to irrelevant learning offers for them.

In order to build models for learning on demand supporting the aspects above, information is necessary about learners and their competencies, work/learning situation and available learning opportunities.

Schmidt (2008) proposes an ontology-based conceptual model for learning on demand.

We present some aspects to be considered. First a provider has to be found that meets the needs of training for the staff and understands the on demand requirements. Second, on demand short modules have to be considered in order to also support instant learning. So the learning is more flexible and the employee can finish a module during lunch or before leaving the office in the afternoon. Third, the access to an instructor/trainer during learning has to be provided if this is possible. The kinds of hands on activities which take place in connection with the course like remote labs, etc should be available to learners at their convenience.

It is useful to have a program for "testing" and recording the results of learning being used by students, trainers, training executives. A last aspect is to find solutions that can accommodate the learner´s needs for on demand learning and interactive exchange with trainers, colleagues which reduce training costs.

Some approaches for on demand, instant learning which will be used in projects coordinated by the author and using experience and requirements of some companies are "lunch and learn" courses, podcasts, half-day courses, mentored learning sessions. We intend to create on demand training courses within our projects which have rich content and offer the possibility to communicate with trainers/instructors during and after the learning module. This combination of free, ready for being learned instantly materials with experienced teachers avoid learners isolation.

Another approach the author experienced in old projects and which will be used further in projects is to create learning communities. This aspect will be presented in the next part of this paper.

Communities Orientated toward Instant Learning on Demand

Such communities are networks of individuals who share a domain of interest and knowledge about which they communicate and would like to learn on demand to increase their knowledge via formal or informal methods in order to solve problems.

Instant learning in communities means the acquisition of knowledge and skills as fast as they are taught or demonstrated to the communities participants – instantly.

Informal learning is more suitable for this kind of learning and occurs more frequently in such cooperations than formal one. According to Lave and Wenger (1991) this involves "the process of becoming a full participant in a sociocultural practice". Learners participating in a virtual learning community are assimilated into the practices of the community. More experienced participants (trainers, moderators, etc.) pass the knowledge and skills they have acquired to the others to be learned for their current needs and thereby, the shared expertise of the participants is improved.

The use of social media with Web 2.0 services and eLearning 2.0 in learning communities improves the ability of members to socially interact with the technology used (communication with technology). Social media tools like Internet forums, weblogs, social blogs, microblogging, wikis, podcasts, photographs or pictures, video, rating and social bookmarking are easy to use can help to create a more dynamic community and provide an ongoing conversation benefiting the members.

By using social media tools in learning environments supporting the community the potential exists for the combination of synchronous and asynchronous communication, access to – and from geographically isolated communities (Hlapanis & Dimitracopoulou, 2007) and international information sharing.

Supporting learners communication includes assisting students in coping with the technology, providing multiple means of access, helping students to achieve text based communication skills, setting personal goals and priorities and dealing with conflict and tension.

Many papers report benefits of collaborative learning in communities including increased motivation (Maxwell, 1998) and fast perception of skill development including satisfaction.
Some positive aspects in further education in companies, which could be influenced by such communities, are the following:

- Improving the learning curve of new participants who need to learn fast
- Supporting new ideas for products and services
- Reducing rework and preventing "reinvention of the wheel"
- Responding more rapidly to participants' needs and inquiries.

There is little knowledge about important elements to guide the development process of practice oriented learning communities. Palloff & Pratt (1999) underling as useful that the members of the learning communities know their roles and responsibilities.

In order to develop a sense of "place", of belonging, the establishing of common symbols, including a friendly, open and polite voice, suggesting to build trust and accompanying the group through stages of group development are issues to be considered

McMillan & Chavis (1986) propose four elements with attributes which can be useful in order to achieve benefits like the ones listed below:

Table 1. Elements of sense of community.

Element	Attribute
Membership	Boundaries that separate US from THEM Emotional safety A sense of belonging and identification A common symbol system
Influence	Individual members matter to the group The group matters to the individual Making a difference to the group Individual members influence the group The group influences the individual member
Fulfillment of needs	Benefits and rewards Members meeting their own needs Members meeting the needs of others Reinforcement and fulfillment of needs
Shared emotional	Identifying with a shared event, history, time, place or experience Regular and meaningful contact Closure to events Personal investment Honour Spiritual connection

There are some differences between learning communities and functional or project teams. A project team has specific objectives, with members working towards formal milestones and deadlines and is dissolved once its mission is accomplished. Community members change, their objectives and needs too; communities can exist as along as their members are interested in contributing and gaining knowledge and resources so it is important to "hold the community alive".

Some principles of "designing for aliveness", followed in some of our projects which can guide organizations wishing to start a learning community are (Wenger et al., 2002):

- Design for evolution, e.g. design elements should be combined in a way that they may act as catalysts for a natural evolution to a life-long learning oriented community,
- Keep an open dialog between inside and outside perspectives of the community because the latter can help community members to see new possibilities and act effectively,
- Consider different levels of learning and also of participation for the members of the community (leadership roles, core active group, occasional participants, etc.),
- Develop public and private community spaces,
- Create a rhythm for learning in the community.

Referring to virtual communities, it is clear that the development of a collaborative learning environment is not simply the use of software to support communication and inform the learners that this is available for them. This behavior can lead to participants leaving the community after a short time.

The model of Biggs (1989) suggests some influencing factors and a chain of events that can be adapted to support the development of a community.
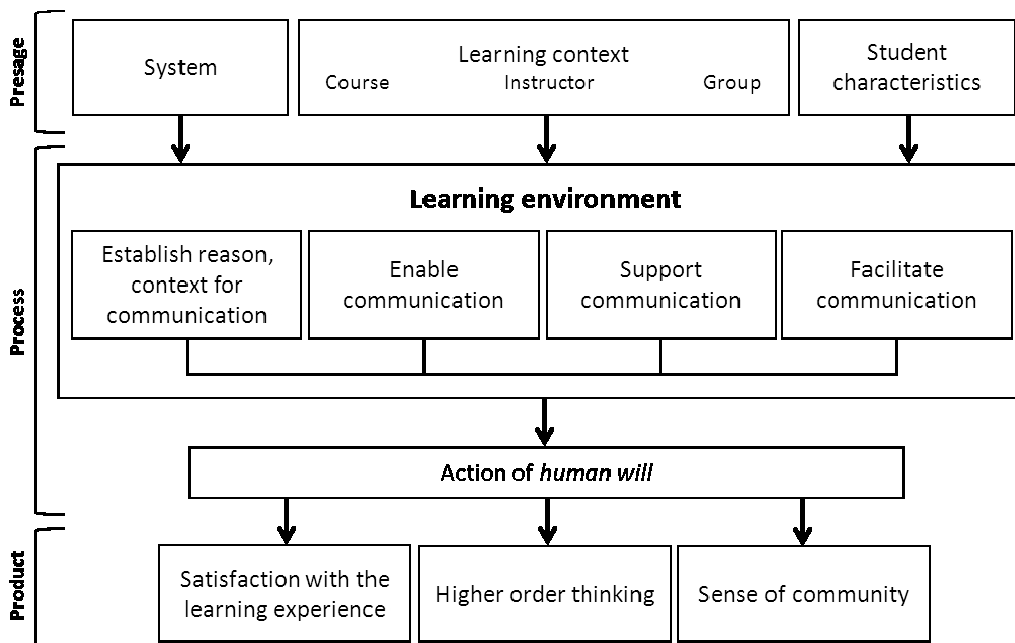

Figure 1: Presage, Process and Product in learning environments supporting community development.

Source: Biggs (1989)

The Biggs model describes the process of learning. Presage factors interact to produce an approach of learning, process factors describe the approaches learners adopt to process academic tasks and the product reflects the learning outcome. The development of a learning community can begin with presage factors, including the learning system, learning context and the learners that interact to produce an approach to community development (Brook & Oliver, 2003). Then the process factors describe how the learners process strategies for the development and sense of the community.

Referring to the construction of knowledge in communities, there is a general agreement that within the community tacit and explicit elements of knowledge are interwoven; capturing, sharing, transfer and creation of knowledge are promoted in a learning community.

We have presented some benefits derived from transferring knowledge and from learning in communities by a sense of shared interests and an extending/deepening knowledge, which derived from ongoing interaction. Despite the great potential, there are also barriers and limitations particularly of current technologies in relation to virtual communities of practice.

It is important to acknowledge that the social phenomena appearing within the community could also have negative influence on members like the following (Wenger et al, 2002):

- The need for members to conform
- The subsequent loss of individuality
- The potential to hoard knowledge and thus restrict innovation
- The potential of community to exert pressure on some individuals to engage in non conforming rather than in conforming.

The lack of face-to-face contact within a virtual community can often be an advantage, because it helps to suppress traditional group norm behavior. On the other hand, it remains open if a learning community where face-to-face contact is entirely excluded can be sustained over a long period. Face-to-face interaction and socialization processes consolidate the relations between members and group membership. Trust is important for knowledge sharing and development in a virtual community and this is developed primarily through face-to-face interactions.

Another important barrier to virtual communities refers to the selectivity in the choice of ICT to support them. Virtual communities need to use user friendly Internet standard technologies particularly social media. They are relatively inexpensive and accessible to enable anyone (even private individuals) to publish or access information.

Our experience and results of other projects show that community members often have difficulties with the ICT access and ICT skills referring for example to the use of on-line forums and eLearning training. The best software is one easy to use like social media or a software the community is most familiar with and is most prepared to use.

Examples

Within the European project SIMPEL (www.simpel-net.eu) aimed at small and medium sized companies (SMEs) and coordinated by the author, a community of practice (CoP) with representatives of small and medium sized companies, ICT and education experts and providers based on Moodle has been developed. By using weblogs and wikis, the community members created common resources for small and medium sized companies like suitable eLearning models and guidelines. This CoP will be extended with modules for instant on demand learning having topics proposed by some ICT companies which are members of the CoP.

Another example is the ongoing innovation transfer Leonardo project Net Knowing 2.0: Web 2.0 Technologies and Net Collaborating Practices to support informal learning in European SMEs. Main activities of the project are:

- Analysing the transferability of results of SIMPEL, and other related experiences, results or products existing in the partnership and agreeing the transfer strategies.
- Identifying transfer requirements: national contexts, specificities of target groups and competencies to be addressed by the didactical package.
- Elaborating the training curriculum (taking account available products of SIMPEL and of other projects)
- Elaborating a Training Package for SMEs and implementing the corresponding eLearning platform
- Developing a community (continuing/based on the SIMPEL CoP) to help SMEs having less experience and resources to solve practical problems in using eLearning, instant learning on demand, experimenting networking practices, using social media/ Web 2.0 technologies to support knowledge management and informal learning.

In the first months of the project results of SIMPEL, which could be transfered within Net Knowing 2.0, have been structured. A catalogue of recommendations has been developed for the transfer process which used also results of discussions with representatives of 15 German SMEs which have been interviewed in this context by the author.

Within the discussions with the SMEs some qualification problems have been identified which could be solved by using instant learning on demand particularly in a community. Most of the interviewed companies affirmed that they need instant learning on demand but they do not have a strategy for it and/or have no life long learning (LLL) strategy.

The building of a community has been started by using social media tool Tiki Wiki CMS Groupware, a free and open source wiki-based, content management system written primarily in PHP and distributed under the GNU Lesser General Public License (LGPL) license. The decision to use Tiki Wiki was taken after an analyse of some open source tools.

The further step in the project Net Knowing 2.0 is the development of a Framework for a LLL strategy for SMEs, including instant on demand learning. This is a common task within the European Project ReadiSME about the ability (readiness) of SMEs to embrace learning opportunities in order to improve skills and competitiveness. For the determination of LLL readiness the project partners (the author is a partner) developed a structure taking into consideration factors like: Organisation/Management, Technology and Human Resources. 20 German SMEs have been interviewed and 2 case studies have been carried out in order to evaluate LLL readiness of German SMEs.

The Framework for a LLL strategy which will be developed uses the readiness results and will include an organisational part and a part with requirements for building a successful LLL strategy like motivation, behavior, social influences.

Conclusions

In the projects, which the author coordinates or works, the idea that on demand, instant learning supported by social media based on Web 2.0 and the social phenomenon of communities can be used to support learning to cope with new economical and educational environments has been advocated. But the role of social interaction in communities for construction of knowledge for instant on demand learning and its support by social media has to be researched further.

Also the processes and procedures for the development of such communities should be researched; the model of Biggs should be completed including also the importance of different factors.

Models for on demand, instant learning to be introduced into the vocational and

continuing education are necessary.

Acknowledgements

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