Boosting Informal Workplace Learning in Small Enterprises

Miloš Kravčík, Kateryna Neulinger, Ralf Klamma

Advanced Community Information Systems (ACIS), Informatik 5,
RWTH Aachen University, Germany
{kravcik, neulinger, klamma}@dbis.rwth-aachen.de

Abstract Where participation of small enterprises in vocational education and training decreases, it risks obsolescence of their knowledge base compared to competitors. Currently we are participating in two projects that aim to address the issue of how to boost take-up of informal learning at the workplace: Learning Layers and BOOST. Previous projects [e.g., ROLE] show the importance of having personalised learning solutions with high relevance, high effectiveness and low barriers to use. Therefore we aim to provide predefined and customizable Personal Learning Environments that support awareness and reflection of users, especially workers in small enterprises.

Keywords: Informal Workplace Learning, Personal Learning Environments.

1 Introduction

Support of informal learning at the workplace is real issue and we attempt to address it in two projects: Learning Layers [1] and BOOST [2]. While the first one is dealing with the problems of scalability and scaffolding, the second one is focusing on small enterprises (up to 20 employees) and their needs. Both of them build on the outcomes of the former ROLE project [3], especially the technological platform that facilitates design and development of Personal Learning Environments (PLEs) [4]. Moreover, BOOST considers innovative methodologies from the BeCome [5] project that identify the Business Goals of small companies and manage the associated learning processes. The PLEs provide customized learning and training solutions that enable to meet the specified Learning Indicators. The overall aim is to support employees in training activities and to facilitate their personal development. For this purpose we want to integrate learning in their work processes. We develop widgets that should support awareness and reflection of various types of users in practice. In this context it is crucial to consider specific constraints and requirements of small companies, in order to make the developed solutions attractive and useful for all different roles: managers, trainers and employees. Our solutions support personal competence development at the workplace in all phases, i.e. planning, learning, and reflection. They help to identify business goals and existing competence gaps. Moreover, they recommend learning resources from existing repositories and suitable peers in communities of practice.

2   BOOST Technical Prototype

Our proposed solution should support *awareness* by augmenting informal learning with relevant information of the business goals, current and target competences of employees, time plans, learning resources and learning progress overviews on various levels (e.g. company, employee). *Reflection* is an important part of self-regulated learning that helps the users to evaluate their progress and to plan the next steps. These features had to be considered in the BOOST technical prototype, which is still work in progress. It includes this basic workflow: 1. Identify critical business goals in the company. 2. Select employees to address them. 3. Support their learning. 4. Monitor the learning progress of the company and of the individual employees. Our data model is hierarchical: 1. Business Goals (BGs – e.g. Web development). 2. Learning Indicators (LIs – e.g. Web design, information architecture). 3. Learning Resources (LRs – including learning materials, tools and peers).
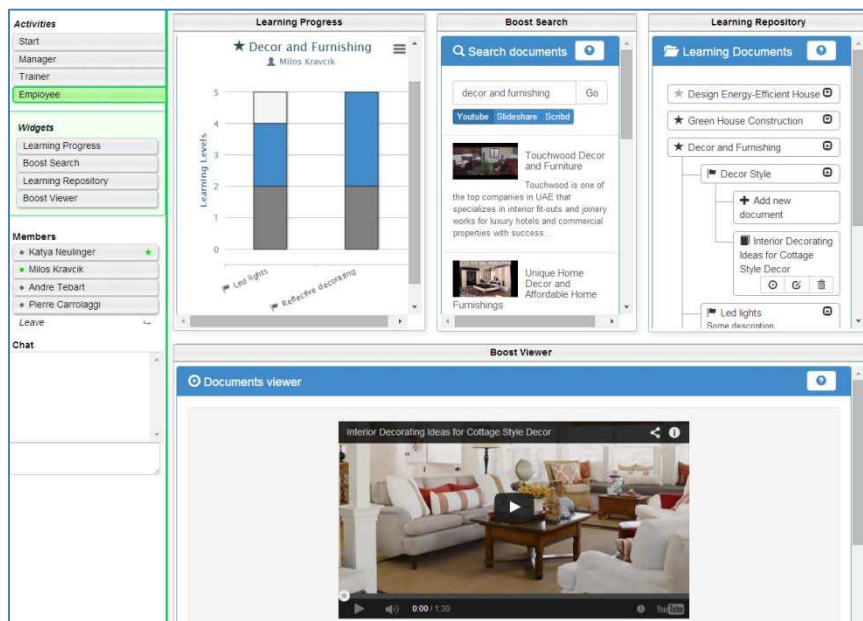

Figure 1: Employee Environment

We distinguish 3 different user roles that have different characteristics and requirements: Manager (e.g. business manager, business advisor or consultant), Trainer (e.g. training manager, learning facilitator) and Employee. *Manager* specifies BGs for the company, decides which BGs are urgent and which of them are relevant for which employee. Moreover, this role can also assess employees and monitors their learning progress. *Trainer* describes LIs for selected BGs and the relevancy of LIs for individual employees, recommends LRs for the LIs, and chooses relevant Learning Repositories, where additional LRs can be found. *Employee* (Fig. 1) gets an overview of BGs and LIs assigned to her, together with the recommended LRs. According to

the descriptions of LIs she can search for additional LRs in the predefined Learning Repositories and add them to her portfolio. She can also access the selected LRs in order to learn. Finally, she can monitor her learning progress.

The functional requirements for competence management include: 1. Specification of relevant BGs (high level competences), their priorities and time scales. 2. Assignment of LIs (concrete competences) to each BG, considering also time scales. 3. Assignment of LRs to LIs. 4. Assignment of relevant BGs and LIs to employees. 5. Setting up target LI (proficiency) levels for relevant BGs for each employee, considering time scales. 6. Assessment of the start and current LI (proficiency) levels for the employee. 7. Monitoring the training progress in the company and also of each employee (considering also time scales). The functional requirements for the learning support are still relatively vague, as they will be more domain dependent: 1. Community support – sharing experience, communication, and collaboration. 2. Domain specific support – learning and assessment. 3. Annotation of learning resources assigned to LIs. 4. Considering preferences of individuals.

3   Conclusion and Future Work

In the first year the BOOST consortium identified the main requirements and designed a solution. Afterwards we have developed the first version of the technical prototype, which has been evaluated in interviews with 15 stakeholders. Based on their outcomes the technical prototype will be updated and enhanced with additional features, including privacy requirements and personalization. The current version is suitable for companies with open environments, where employees do not mind seeing each other's competences and learning progress. But in many companies more privacy is demanded, where employee can see just his or her data. Another important feature is assignment of timescales to business and learning goals as well as their monitoring and notifications. The new version will be tested in companies.

References

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