

EDITORIAL PREFACE

Informal Learning Management Experiences

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ABSTRACT

Informal learning plays an important role in current society, both in workplace and daily people's activities, although most of the persons are not aware of informal learning importance. This special issue is devoted to incorporate the consciousness of informal learning as part of an individual's development within the workplace context; this starts with the identification by the learner of informal learning activities and the subsequent process in which these are made visible to the institution. This goal is shared by the TRAILER European Project, which has been carried out during 2012-2013. Thus, this special issue presents some important outcomes of this project combining with other interesting experiences related to informal learning and competences management.

Keywords: Competences, Human Resources Management, Informal Learning, ICT Tools, Knowledge Management, Motivation

INTRODUCTION

Knowledge management strategies in workplace must take into account that employees' continuous learning has a very strong component regarding which is known as informal learning (Conner & Clawson, 2004; Cross, 2009). That is mean people learn living experiences, looking for resources and interacting with their peers in face-to-face conversations or throughout virtual dialogues in Internet (García-Peñalvo, Colomo-Palacios, & Lytras, 2012). Web 2.0 or Social Web (O'Reilly, 2007) is a is changing the way users express themselves on the Internet. The social activities that occur in the Web 2.0 open and expand communication and interaction scenarios throughout complex and interconnected (ideally interoperable) technological ecosystems (García-Holgado &

García-Peñalvo, 2013). Actually, we live a technological revolution that has a great influence in the way people learn. We should not ignore common trends that have appeared linked to learning (also teaching) processes in the Internet 2.0 philosophy such as open knowledge philosophy (García-Peñalvo, García de Figuerola, & Merlo, 2010), Massive Online Open Courses (MOOCs) (Kay, Reimann, Diebold, & Kummerfeld, 2013), communities of practice (Wenger & Snyder, 2000), or gamification (Martínez-Ortiz et al., 2013) for example.

However, one of the biggest open challenges of informal learning at the workplace is precisely the recognition of informally acquired competences and their inclusion in a knowledge management policy of both the individual and the entity to which he/she is linked. This topic was the main goal of TRAILER (Tagging,

Recognition, Acknowledgment of Informal Learning Experiences - <http://trailerproject.eu/>) project (García-Peñalvo, Conde, Zangrando, et al., 2013; García-Peñalvo, Zangrando, et al., 2012).

TRAILER is a KA3 ICT multilateral project funded by the European Commission, started on January 2012. For two years, a group of researchers from seven European institutions were working together to develop an innovative ICT-based service (García-Peñalvo, Johnson, Ribeiro Alves, & Minovic, 2014), which should allow the learner to identify episodes and evidences of informal learning and which should allow the institution to recognize those informal learning activities in dialogue with the learner.

The main objective of the project is to incorporate the consciousness of informal learning as part of an individual's development; this starts with the identification by the learner of informal learning activities and the subsequent process in which these are made visible to the institution. This task will be done by developing methodologies and tools that will facilitate this process, making it transparent both to learners and institutions and allowing all the stakeholders involved to make the most out of these processes.

TRAILER project involves learners and institutions. 'Learners' may be workers in a workplace, or traditional learners in an educational institution. Through transparency of communication, the TRAILER environment enables discussion between the different stakeholders and institutions concerning informal learning activities, the associated competences and how this information can be exploited. In order to achieve this, a staged methodology supported by a technological framework has been deployed.

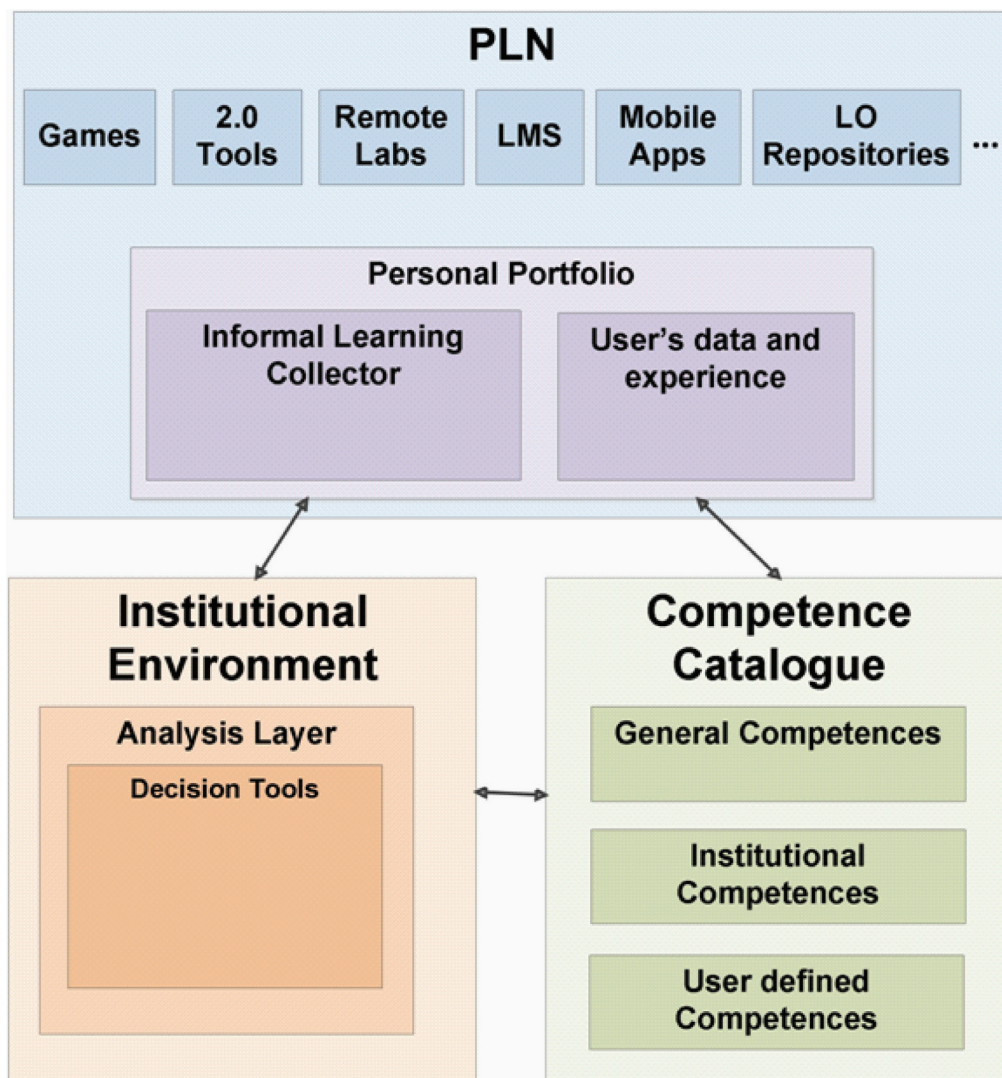
The TRAILER methodology defines a framework with several components and interfaces to make possible the interaction required. The framework is described in Figure 1 where it is possible to see a Personal Learning Network (PLN) that groups the tools that the user employ to learn in an informal way such as Wikipedia, Youtube, Games, Social Networks, LMS, Remote Labs, Expert Forums, Twitter,

etc. This concept is derived from the concept of PLEs (Personal Learning Environments), which are learning environments that "provide students their own space to develop and share their ideas, through learning environments that connect resources and contexts so far apart" (Attwell, 2007).

The framework includes a portfolio in which informal, non-formal and formal learning experiences can be stored and published. There is also an interface to facilitate gathering informal learning activities. We call this component the informal learning collector (ILC). Additionally, there are several institutional tools. These are: a competence catalog that facilitates a way to identify the informal learning experiences taking into account learners or institutional perspectives; and an institutional environment that facilitates the analysis of the published information thus facilitating decision-making about learning issues related with the institution.

Given this framework it is possible to define a workflow that makes informal learning experiences transparent to learners and institutions in such a way that both of them will benefit. Such workflow consists on: 1) The learners, after identifying an instance of informal learning that has taken place in their PLNs, tag it using an interface known as the Informal Learning Collector with tags from a predefined competence catalogue. This information is then stored in a portfolio owned by the learner. 2) At a later moment the learners can review the range of tagged informal learning instances and can decide which of them they will make visible to the institution (their employer or their tutors). 3) The institution is able to view this information and analyze it. 4) The information permits a dialogue with the learner in order to agree on the competences that have been acquired through informal processes, and orient future activity. The information also allows the institution to plan formal and non-formal actions in the light of the informal learning that is taking place, and permits matching learners to others with similar interests based on their informal learning activity, interests and development. This way, the developed methodology and technology

Figure 1. TRAILER framework (García-Peñalvo & Conde, 2014; García-Peñalvo, Conde, Zangrando, et al., 2013)



framework facilitate learners/employees and institutions the co-creation of knowledge from informal learning instances (García-Peñalvo, Conde, Johnson, & Alier, 2013)

TRAILER project make possible the use of contrasting tools to gather informal learning activities. The most common tool is the web-browser. Navigation to a web page, participation in a forum, reading a blog or seeing a video constitutes examples of activities that the learner might choose to submit. However these are not

the only ways to gather information, some other significant ways to take into account informal learning activities by using tools on the cloud, such as game interfaces, remote labs interfaces and social widgets (García-Peñalvo et al., 2014).

On the other hand, the tools mentioned above can work in an independent way to carry out informal learning activities. However TRAILER project proposes a way to make such activities visible for the users' institutions or employers. One of the TRAILER aims is

to facilitate institutional decision-making by harvesting the informal learning activities carried out by their users. To do this it is necessary to gather all the activities carried out in those tools and others on the cloud, and provide to learners a way of classifying and publishing that information to the institutions (García-Peñalvo & Conde, 2013; García-Peñalvo & Conde, 2014; García-Peñalvo et al., 2014).

This special issue presents some important outcomes of TRAILER project combining with other interesting experiences related to informal learning and competences management.

SPECIAL ISSUE CONTENTS

Four papers compose this special issue. The first two articles are related to TRAILER projects. The other two present different approaches about informal learning conception. This collection of papers is complemented by two regular papers: “Twirl of Dexterity - A Gamut to Prevail in the Current Times in the Information Technology Industry” and “Social Network Behavior as indicator of Personality, Motivation and Cultural Values”.

The first paper by Clara Viegas et al. is entitled “TRAILER – A tool for managing informal learning”. This contribution presents a study on the perception and usage of a tool that would help keeping track of learners’ informal learning. This study was conducted both within academic and professional contexts and was developed within the European Commission funded TRAILER project. The contexts were similar regarding the importance and perception of informal learning, but differed concerning tool usage and the usefulness of such a platform. The overall idea of managing one’s informal learning was well accepted and welcomed, which validated the emerging need for a tool with this purpose.

The second paper by Brouns et al. is entitled “E-portfolios in support of informal learning”. This article is centred in one of the main technological components of the TRAILER ecosystem: the e-portfolio. The authors illustrate how e-portfolios, as a store of learning activities and

resulting products can support reflection on the learning process by allowing learners to monitor their learning behaviour. Findings indicate that ease of use is crucial. User interface design should accommodate the needs of the learner to promote uptake of the tool. The e-portfolio has to be an integral part of the learner’s working and learning processes, and assist the learner by tracking and presenting his learning activities for easy inclusion into the e-portfolio.

The third paper by Ilahi et al. is entitled “Semantic models for competence-based assessment”. In this article, authors explore the importance of competency and competence modeling conceptual understanding. They review the benchmark literature on the concepts, models and approaches of competence and competency and explore the confusions surrounding the pair of concepts; thus enabling to build our competence-based assessment approach within e-learning environments in an effective and efficient way. The proposed approach is characterized by the convergence of lifelong, formal, non-formal and informal competence-based learning activities.

Finally, the fourth paper by Lifeng Cheng and María Eugenia González is entitled “Is it a small world after all? Mapping intercultural competence in computer mediated communication users in Spanish campus”. They present a study that is focused on exploring the intercultural communication competence in terms of developmental model of intercultural sensitivity in netizens among Spanish college students.

The set of papers in this issue show the importance of the informal learning and competence management in work environments. Guest editor hopes that readers find the papers of this volume useful and innovative.

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REFERENCES

- Attwell, G. (2007). The personal learning environments - The future of eLearning? *eLearning Papers*, 2(1).
- Conner, M.-L., & Clawson, J. G. (2004). *Creating a learning culture: Theory, practice, and technology*. Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9781139165303
- Cross, J. (2009). Informal learning 2.0. sustaining the corporation in the Network Era. *Chief Learning Officer*, 8(8), 16.
- García-Holgado, A., & García-Peñalvo, F. J. (2013). *The evolution of the technological ecosystems: An architectural proposal to enhancing learning processes*. Paper presented at the TEEM Conference'13, Salamanca, Spain. doi:10.1145/2536536.2536623
- García-Peñalvo, F. J., Colomo-Palacios, R., & Lytras, M. D. (2012). Informal learning in work environments: Training with the Social Web in the workplace. *Behaviour & Information Technology*, 31(8), 753–755. doi:10.1080/0144929X.2012.661548
- García-Peñalvo, F. J., & Conde, M. Á. (2014). Using informal learning for business decision making and knowledge management. *Journal of Business Research*, 67(5), 686–691. doi:10.1016/j.jbusres.2013.11.028
- García-Peñalvo, F. J., & Conde, M. Á. (2013, July 9-11, 2013). *Knowledge management and decision making based on informal learning activities in business*. Paper presented at the Proceedings of the 2nd Global Innovation and Knowledge Academy (GIKA 2013), Valencia, Spain.
- García-Peñalvo, F. J., Conde, M. Á., Johnson, M., & Alier, M. (2013). Knowledge Co-Creation Process Based on Informal Learning Competences Tagging and Recognition. [IJHCITP]. *International Journal of Human Capital and Information Technology Professionals*, 4(4), 18–30. doi:10.4018/ijhctip.2013100102
- García-Peñalvo, F. J., Conde, M. Á., Zangrando, V., García-Holgado, A., Seoane, A. M., & Alier, M. et al. (2013). TRAILER Project (Tagging, Recognition, Acknowledgment of Informal Learning Experiences). A Methodology to Make Learners' Informal Learning Activities Visible to the Institutions. *Journal of Universal Computer Science*, 19(11), 1661–1683.
- García-Peñalvo, F. J., García de Figuerola, C., & Merlo, J. A. (2010). Open knowledge: Challenges and facts. *Online Information Review*, 34(4), 520–539. doi:10.1108/14684521011072963
- García-Peñalvo, F. J., Johnson, M., Ribeiro Alves, G., & Minovic, M. (2014). Informal learning recognition through a cloud ecosystem. *Future Generation Computer Systems*, 32, 282–294. doi:10.1016/j.future.2013.08.004
- García-Peñalvo, F. J., Zangrando, V., García-Holgado, A., Conde, M. Á., Seone Pardo, A. M., Alier Forment, M., et al. (2012). *TRAILER project overview: Tagging, recognition and acknowledgment of informal learning experiences*. Paper presented at the 2012 International Symposium on Computers in Education (SIIE), Andorra La Vella, Andorra. October 29-31, 2012. <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6403200>
- Kay, J., Reimann, P., Diebold, E., & Kummerfeld, B. (2013). MOOCs: So Many Learners, So Much Potential..... *IEEE Intelligent Systems*, 28(3), 70–77. doi:10.1109/MIS.2013.66
- Martínez-Ortiz, I., Blanco, Á. d., Torrente, J., Serano, Á., Moreno-Ger, P., Fernández-Manjón, B., & Marchiori, E. J. (2013). Addressing serious games interoperability: The eAdventure journey. *Journal of Advanced Distributed Learning Technology*, 1, 60–76.
- O'Reilly, T. (2007). What is Web 2.0: Design patterns and business models for the next generation of software. *Communications & Strategies*, 1(65), 17–37.
- Wenger, E. C., & Snyder, W. M. (2000). Communities of Practice: The Organizational Frontier. *Harvard Business Review*, 78, 139–145. PMID:11184968

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