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Personal Learning Environments

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Editorial

Personal Learning Environments

The proliferation of learning innovations such as personal devices, granular and distributed applications, services, and resources, requires the learner to develop his or her own strategies for managing the various information streams and tools to support learning. Such strategies are necessary not only in educational settings, but basically in any life situation which can become a moment or an episode of learning. Digital and non-digital building blocks can be individually combined by learners in their own Personal Learning Environment (PLEs). More of an approach or strategy than a specific learning platform, a PLE is created by learners in the process of designing and organising their own learning, as opposed to following pre-arranged learning paths. In this way, PLEs are distinctly learner-centred and foster autonomous learning. PLEs are by no means isolated; they are interconnected in a digital ecosystem of media, tools and services. Instead of asking learners to navigate within one monolithic environment, PLEs act as a gateway to an open and connected learning experience. This approach marks a shift towards a model of learning in which learners draw connections from a pool of digital and non-digital building blocks, aggregating, mixing and combining them into unique constellations as part of learning.

While emphasizing the active role of a learner, the PLE approach implies that learning is not located in a specific time and place, but is an ongoing, ubiquitous and multi-episodic process. As PLEs allow the collocation of diverse learning activities, tools, and resources, contexts permeate and learning becomes connected. In this sense, PLEs challenge some dominant paradigms in education and in the traditional understanding of borders, be it in view of learning places, educational roles or institutional policies.

This Special Issue builds on the current PLE discussion and focuses on crossing the boundaries of learning contexts. It features some emerging practices, including the construction of PLEs as part of an augmented localised learning experience with mobile devices; PLEs as an approach to supporting learning through work practice; and using gamification and open badges as part of the PLE approach. The findings and insights of the articles in this issue demonstrate the rich contribution of the PLE approach to the opening up of education.

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Tags

smart city learning, urban computing, educaching, glocality, personal learning environments.

Personal Learning Environments in Smart Cities: Current Approaches and Future Scenarios

With the increasing number of the global population living in densely populated and technologically advanced urban spaces, the notion of smart cities is gaining importance, especially in view of citizen engagement, learning and participation. We propose to consider smart cities as learning spaces and call for innovative pedagogical approaches for using technologies embedded in physical environments to support connected and ubiquitous learning in smart cities. In this paper, we discuss smart cities as spaces for constructing Personal Learning Environments. Our special focus is on mobile and locative media, which open new possibilities of interaction with the surrounding environment. In technology-rich infrastructures such as smart cities, physical objects, including buildings, works of art or points of interest, can become part of the learning environment. When mediated through technologies, e.g. by means of mobile and locative media, the surrounding physical environment and the digital environment can be dynamically merged into augmented, ad-hoc Personal Learning Environments. In this paper we give a short introduction to smart cities, smart citizens and smart city learning, and go on to outline some innovative applications of mobile and locative media in urban spaces, including open badges, smart glasses and mobile tagging, and discuss their potential for learning. Following these examples, we discuss educaching as an approach to smart city learning and provide some practical examples based on the example of etiquetAR, a mobile, locative application that allows creating interactive tags to support augmented learning experiences. We then present the results of an international, explorative study on smart city learning, which we conducted with educators from Europe, North America, South America, Middle-East and Asia-Pacific. Based on the synopsis of current research and practice and the results of our study, we argue for an extended view of Personal Learning Environments which are not permanent, but created ad-hoc and adjusted dynamically by connecting virtual and physical spaces in smart cities.

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/in-depth_35_1.pdf

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Tags

Personal learning environments, PLEs, conceptual differences, literature review, literature synthesis

Personal learning environments: a conceptual landscape revisited

This paper reports on a renewed attempt to review and synthesise a substantial amount of research and development literature on Personal Learning Environments (PLEs) published in recent years. Earlier comprehensive review efforts (Buchem, Attwell, & Torres, 2011; Fiedler & Väljataga, 2011) had attested considerable conceptual differences within the research community. If and how these differences have qualitatively changed since 2010, is the focus of an ongoing literature review project. While the project is still work in progress, some provisional findings and insights are reported and discussed.

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/in-depth_35_2.pdf

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A Gamification Framework to Improve Participation in Social Learning Environments

This paper presents a gamification framework applied to the integration of game elements in Social Learning Environments. The framework is being applied to a K6 Social Learning Environment leading to a gamified system. With this gamified system it is expected to achieve a rise in the motivation to use the platform with students becoming more loyal users. It is also expected that they will be more deeply involved and engaged in educational activities supported by the environment. The proposed gamification framework includes architecture for a gamified system and a guide to help the development of gamified activities.

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/in-depth_35_3.pdf

Tags

Gamification, Social Learning Environments, game elements, gamification framework

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Developing a Framework for Research on Personal Learning Environments

Each learner is unique and will have unique learning experiences. What motivates learning, what triggers curiosity, and what tools might enhance learning will be different for different learners. This makes the design of a Personal Learning Environment that serves as an aid to each possible learner a challenge. The design of learning experiences is a complex matter and involves more than using effective technologies and applying cognitive triggers. There is also a need to design for the affective dimension of human experiences: the impressions, feelings and interactions that a learner might or could have with the online content, with others, and with technology. Our research in the design and development of a Personal Learning Environment led us to the development of a research and design framework that encompasses the full process cycle, from inception of the PLE idea, research of suitable tools to incorporate in it, to the recommendation of a prototype after educational research and evaluation of learner experiences with the learning environment. The research highlights tools suggested by 'super-users', motivational factors in connectivist learning, and competencies required to operate in such a learning environment.

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/in-depth_35_4.pdf

Tags

PLE, MOOC, learning experience, research design

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Tags

organisational learning,
professional learning,
workplace learning,
self-regulated learning,
personalisation

Developing PLEs to support work practice based learning

This paper describes the research and development of a mobile, work-based Personal Learning Environment being piloted in the construction and health sectors. It examines a number of critical issues, particularly: the nature of learning and the application of knowledge in the workplace, interactions with physical artifacts, and the way new knowledge is developed and shared within and between organisations. A mobile PLE needs to support the different dimensions of know-what, know-how, and know-why and to enable skilled workers and learners to make informed choices between different possible ways of carrying out work tasks. Given the importance of domain knowledge, of communities of practice and of a holistic learning environment, co-design processes have to be developed involving multiple stakeholders including SME managers, trainers and end users.

Instead of seeing mobile devices as containers for learning, the PLE is viewed as an active work and learning tool within a changing work environment. The aim is to develop PLEs that are embedded in the practice of both learning and working, and that can bring together informal and formal learning and facilitate the development and transfer of knowledge, learning and innovation between different contexts and domains.

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/From-field_35_1.pdf

Using PLEs in Professional Learning Scenarios – The Festo Case for ROLE

The competitiveness of a company depends strongly on the skills and abilities of its employees. Teachers and learners within companies often lack media competence and the ability to use self-regulated learning (SRL). The evaluations conducted in the scope of the Responsive Open Learning Environment (ROLE) project showed that the vocational training and workplace learning providers appreciated the SRL approach and the idea of personalisation of the learning tools and content. Further, the implementation of SRL in an organisation needed the development of specific competencies by the learners, as well as guidance through the learning process from its very beginning. Thus, a learning software solution allowing a combination of curriculum-based and self-regulated learning approaches has become necessary. To address this requirement, the ROLE Project developed a Personal Learning Management System which is an OpenSocial-based Learning Management System (LMS) combining functionalities of a LMS and a PLE (Personal Learning Environment) and allowing users to construct their virtual learning environment according to their learning history, goals, and preferences. This paper describes the development of the ROLE solution from the point of view of Festo, a test bed which actively contributed to the development, testing, evaluation, and application of the ROLE approach and technology.

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/From-field_35_2.pdf

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Tags

PLE, Web 2.0, design-
based research, student's
control, eLearning 2.0,
TPACK

Investigating teachers' perceptions about the educational benefits of Web 2.0 personal learning environments

Implementing personal learning environments (PLEs) in educational settings is a challenging and complex process. Teachers, as the main agents of change in their classroom settings, need support in designing and implementing these new learning environments and integrating them into the educational process. In this paper, we propose a model to implement Web 2.0 PLEs in educational settings based on the conceived objectives of PLEs, namely (i) enhancing the students' control in educational process and (ii) supporting and empowering students to build and deploy their PLEs. In addition, we develop a technological prototype based on the model, and report and analyze the perceptions of a group of teachers regarding the potential of the prototype to improve the educational process. The results suggest that the implementation of the model can contribute to the development of a student-centric learning environment and improvement in the teachers' technological, pedagogical, and content knowledge (TPACK).

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/From-field_35_3.pdf

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Tags

Open Badges, SAPO
Campus, Gamification,
Social Media.

Decentralized badges in educational contexts: The integration of Open badges in SAPO campus

In a context where learners are increasingly assuming an active role in the construction of connective knowledge, it is often difficult to achieve recognition of the skills, competencies and learning developed in informal contexts. In this line of thought, a badging system - supported by Mozilla Open Badges technology - was integrated into SAPO Campus in order to support the natural interaction and assessment processes occurring within and beyond classroom walls. Opposing the basic principles of the SAPO Campus platform, badges are often used from a top-bottom perspective. The research presented in this paper aims to break with that traditional approach through the promotion of two main concepts: user-generated badges and peer-support for badge attribution. This paper will introduce the aforementioned concepts, assessing the potential of the use of badges in the promotion of a truly participatory learning community. Some details of on-going research work will also be presented, including some preliminary data of the first weeks of use of the badging system, suggesting that, even without guidance and despite being launched in a very late and very busy phase of the school year, the system and its main features were used and explored by the SAPO Campus users.

Full text: http://www.openeducationeuropa.eu/sites/default/files/asset/From-field_35_4.pdf