Research Student
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Supervisors
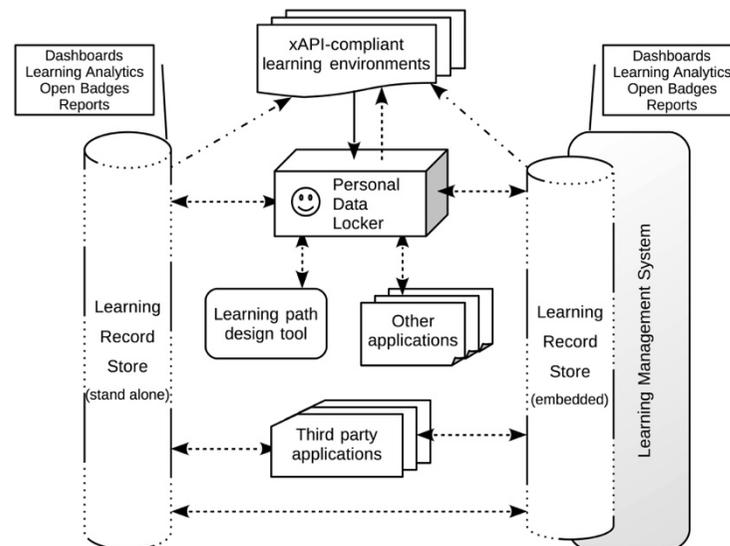**George Magoulas**
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Lifelong Learner Modelling

Research Aims

This research puts forward the integration of learning experiences from learning tools that a person interacts with during his whole life into a lifelong learner model. The aim is to design and develop a middleware infrastructure that will manage the interaction between the lifelong learner model and the applications, and to examine whether such an infrastructure can contribute towards the realisation of the personalised lifelong learning concept.
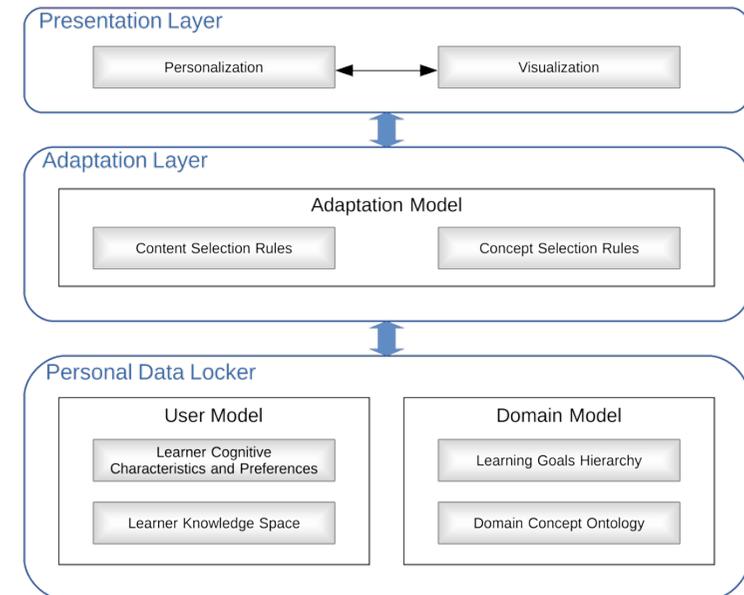
Research Methodology

The current focus of this study is to develop a theoretical framework for designing personalised learning paths for lifelong learners. The framework of **Figure 1** uses contemporary pedagogical approaches that can promote and enforce the idea of a cumulative learning continuum from pedagogy through andragogy to heutagogy where lifelong learners progress in maturity and autonomy. Based on this framework, we propose a system architecture that aims to provide personalised learning pathways using selected pedagogical strategies, and to integrate formal, non-formal and informal training offerings.

Figure 1. Proposed framework for pedagogy-driven ubiquitous learning

Research Approach

The theoretical framework builds on existing conceptual and process models for pedagogy-driven design of learning ecosystems. The system architecture (see **Figure 2**) can integrate a high level of mobility into the learning environment, and we have already demonstrated how it can be applied on a ubiquitous learning environment to enable learning not only through formal, but also through informal and social learning modalities. This allowed us to carry out an extensive evaluation of our framework using two well-known development reference models: the 70:20:10 framework and the 3-33 model.

Figure 2. System architecture for pedagogy-driven learning path design

Publications

Karoudis K., Magoulas G.D. (2017) An Architecture for Smart Lifelong Learning Design. In: Popescu E. et al. (eds) Innovations in Smart Learning. Lecture Notes in Educational Technology. Springer, Singapore.

Karoudis K., Magoulas G.D. Ubiquitous Learning Architecture to Enable Learning Path Design across the Cumulative Learning Continuum. *Informatics*. 2016; 3(4):19.