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.

Research Approach
It is envisaged that the proposed theoretical framework can be applied on different learning environments, and we have already demonstrated how it can be used in the case of a smart learning environment that is implemented as services in the cloud (see Figure 2). We are planning to introduce an improved design of our framework that will build on existing conceptual and process models for pedagogy-driven design of learning ecosystems. The new design will be applied on a ubiquitous learning environment, which will enable learning not only through formal, but also through informal and social learning modalities by integrating a high level of mobility into the learning environment. This will allow us to carry out an extensive evaluation of our framework using two well-known development reference models: the 70:20:10 framework and the 33 model.

![Figure 1. Proposed framework for learning path design](image1.jpg)

![Figure 2. A smart lifelong learning environment implemented as services in the cloud](image2.jpg)

Publications