The project concentrates on offering the learners a set of next-generation support services that run (semi-) automatically and, therefore, require only very limited tutor-based support. The LTfLL project makes extensive use of Language Technologies and cognitive models in the services.

Positioning the Learner

Services are developed to establish the current position of the learner in a domain. Services will offer semi-automatic analysis and comparison of learner portfolios to the domain knowledge and continuous modelling and measurement of conceptual development. This includes:

1) To determine in a (semi-) automatic way learner’s prior knowledge – by analyzing her ePortfolio and the domain of study – to recommend learning materials or courses.
2) To provide formative feedback with regard to the learner’s profile in the domain of study and recommend remedial actions to overcome conceptual gaps.

Learning Support and Feedback

Support and feedback services are developed based on analysis of the interactions of students in chats and discussion forums – using Natural Language Processing (NLP) and Social Network Analysis (SNA) –, as well as textual output of students (e.g. summaries) – using Latent Semantic Analysis. This includes:

1) To offer recommendations based on an analysis of interactions in collaborative learning using chats and discussion forums.
2) To offer recommendations based on the analysis of textual outputs by the learner.

Social and Informal Learning

To support the co-construction of common knowledge and social learning, a knowledge sharing infrastructure is constructed that allows comparison and sharing of private knowledge. Ontologies for formal domain representation are combined with social tagging. Services are developed to facilitate learners and tutors the access of formal and informal knowledge sources (i.e., YouTube, Flickr, delicious) in the context of a learning task. This includes:

1) To provide recommendations on the basis of the learner’s profile, interests, preferences, network and learning task. This requires implementing a Common Semantic Framework (i.e., an ontology).
2) To provide a list of search results prioritized and categorized according to the conditions specified by the learner, and the opinions of the learner’s trusted network of contacts.

Expected results of the services

- Improved appreciation of learner requirements
- Better recommendations on study plans and resources
- Progress monitoring based on learning activities, rather than on formal assessments
- Improve recommendations for competence building
- Improved knowledge co-construction in social and informal learning

Characteristics of the project

- Use of a scenario-based methodology
- Common ground in use cases and pedagogically sound scenarios
- Steers the design and development of the services
- Guides the validation
- Evaluation in realistic settings, with several languages: English, Romanian, Bulgarian, French, German, Dutch

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