

Proceedings of the  
**1st International Workshop on  
eLearning Approaches for the  
Linked Data Age  
(Linked Learning 2011)**

collocated with the  
**8th Extended Semantic Web Conference  
(ESWC2011)**

29 May 2011, Heraklion, Greece



## Preface

While sharing of educational resources on the Web became common practice throughout the last years, a large amount of research was dedicated to interoperable eLearning repositories based on semantic technologies. Data interoperability is even more crucial, since sharing of online resources at Web-scale is widely facilitated by established APIs, such as OAI-PMH or SSI. Moreover, adoption of social computing aspects within personal learning environments has become a dominant paradigm building on principles such as user-centred identity management, service-orientation, and social participation. However, it remains an unresolved challenge to provide a meaningful, automated and personalized integration of diverse learning resources, e.g., formal and informal ones as found on the Web.

Though the eLearning area has brought up a number of comprehensive metadata standards (e.g., ADL SCORM, IEEE LOM, IMS LD) aiming at interoperability across eLearning environments, actual take-up is still fragmented. This can be attributed to their merely XML-driven approaches, the lack of established controlled vocabularies and the incompatibility of individual schemas. Several research efforts tried to address these issues by using Semantic Web technologies and ontology-based approaches. However, these efforts often failed to attract a critical mass of adopters. This is due to reasons such as inherent complexity, the lack of scalable and high-performance tool support when following complex reasoning-based approaches and the inavailability of vocabularies when following proprietary representation schemes. In the meantime, the Semantic Web has redefined itself throughout the last years as a Web of “Linked Data” by establishing principles which support sharing of large datasets on the Web together with a technology stack (use of URIs, RDF, and SPARQL) aimed at their realisation. The huge success and widespread adoption of the Linked Data approach has led to the availability of vast amounts of public data such as DBPedia, WordNet RDF or the data.gov.uk initiative.

Although the Linked Data approach is not yet adopted widely within the eLearning domain, this workshop has emerged on the fundamental belief that the Linked Data approach has the potential to fulfill the eLearning vision of Web-scale interoperability of eLearning resources and highly personalised and adaptive eLearning applications. The workshop has been established to become a highly interactive research forum for exploring the promises of the Web of Linked Data in technology-enhanced learning by gathering researchers from the areas of the Semantic Web and technology-enhanced learning.

The response to the call for papers was overwhelming for the first edition of this workshop. Therefore, after extensive peer review (each submission was reviewed by at least two independent reviewers) we were able to select 13 papers for presentation in the program of the workshop. In addition, the workshop program also had an excellent keynote speaker – Vania Dimitrova of the University of Leeds – a well-known researcher in the areas of technology enhanced learning and Semantic Web.

The workshop would not be possible without contributions of many persons and institutions. We are very thankful to the organisers of the ESWC 2011 conference for providing us with an opportunity to organize the workshop, for their excellent collaboration, and for looking after many important logistic issues. We are also very grateful to the members of the program committee for their commitment in reviewing the papers and assuring the good quality of the workshop program. We also thank the authors for their invaluable contributions to the workshop by writing, revising and presenting their papers. Of course, great appreciation of her time and expertise goes to our keynote speaker Vania Dimitrova. We also want to express our strong gratitude to the publishers of CEUR for publishing the Linked Learning 2011 workshop proceedings, to the European Commission (EC) and the EC-funded research project mEducator for sponsoring the best paper award and to the EasyChair developers for supporting the submission and review process.

May 2011,

Stefan Dietze, Mathieu d'Aquin, Dragan Gasevic, Miguel-Angel Sicilia

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