

LiLe 2012

2nd International Workshop on Learning and Education with the Web of Data

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Following the success of the LinkedLearning 2011 workshop¹, LiLe 2012² provides a forum to discuss approaches making use of Web Data resources and technologies, especially Linked Data, for teaching, learning and education.

Distance teaching and openly available educational resources on the Web are becoming common practices with public higher education institutions as well as private training organisations realising the benefits of online resources. However, most of the research in E-learning has been focusing on creating a variety of metadata formats and environments for the exchange of educational resources. This has led to a fragmented landscape of Web standards and approaches used in the educational domain to expose resources, ranging from domain-specific educational standards such as IEEE LOM or ADL SCORM, to general-purpose approaches such as Dublin Core or Web interface mechanisms such as OAI-PMH or SQI. Consequently, it is not only the case that interoperability between repositories of educational resources remains a challenge, but also that educational Web resources remain underexploited, as their connection, reuse and repurposing are barely supported by such technologies.

In the meantime, the Semantic Web has redefined itself throughout the last years as a Web of “Linked Data”. That was achieved by establishing principles that support sharing of large datasets on the Web together with a technology stack – fundamentally based on the use of URIs, RDF, and SPARQL – aimed at facilitating these principles. The huge success and widespread adoption of the Linked Data approach has led to the availability of vast amounts of public data such as DBPedia³, WordNet RDF⁴ or the data.gov.uk⁵ initiative. To this end, the Linked Data movement is also supporting the exposure of large amounts of reusable data and resources, ranging from domain-specific expert vocabularies to, for instance, data about cultural heritage (e.g., the Europeana dataset⁶), which has the potential to fundamentally aid and transform the production, delivery and consumption of educational services and content. More recently, these approaches started to get adopted by education institutions, with Linked Data technologies being used to expose public information regarding course offering, open educational resources and educational facilities in a readily accessible and reusable way. This has led to the creation of an embryonic “Web of Educational Data” including institutions such as the Open University (UK)⁷ or the National Research Council (Italy)⁸, as well as Linked Data about publicly available educational resources, such as the mEducator – Linked Educational Resources⁹. While the very nature of the Linked Data approach thus clearly offers promising solutions that can potentially transform education, it is not yet adopted widely within the educational field.

As one of the outcomes of the previous edition of Linked Learning (proceedings available at <http://ceur-ws.org/Vol-717>), the LinkedEducation.org platform¹⁰ was set up, which has already gathered a considerable community and a significant amount of resources (e.g., relevant datasets and schemas). Current efforts aim at providing a well-integrated, joint dataset and endpoint which interlinks educational Web data across the Web, and hence, provides a first step towards wider interoperability and take-up of educational Web data.

Building on the overwhelming success of Linked Learning 2011, the Linked Learning 2012 workshop aims at providing a forum for researchers and practitioners making innovative use of Linked Data technologies for

¹ <http://projects.kmi.open.ac.uk/meducator/linkedlearning/>

² <http://linkedlearning2012.wordpress.com>

³ <http://dbpedia.org/>

⁴ <http://www.w3.org/TR/2006/WD-wordnet-rdf-20060619/>

⁵ <http://www.data.gov.uk>

⁶ <http://ckan.net/package/europeana-lod>

⁷ <http://data.open.ac.uk>

⁸ <http://data.cnr.it>

⁹ <http://linkededucation.org/meducator>

¹⁰ <http://linkededucation.org>

educational purposes on the Web to discuss, exchange and disseminate their work. Last years addition of the workshop has proven its potential to be a highly interactive research forum by gathering researchers from the areas of the Semantic Web and technology-enhanced learning.

The response to the call for papers was overwhelming for this second edition of LinkedLearning (or LiLe, as it is now called). Therefore, after extensive peer review (each submission was reviewed by at least three independent reviewers) we were able to select 12 papers for presentation in the program of the workshop. In addition, the workshop program also had an excellent keynote speaker – Wolfgang Nejdl Director of the L3S Research Center in Germany.

The workshop would not be possible without contributions of many people and institutions. We are very thankful to the organizers of the WWW 2012 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 his time and expertise goes to our keynote speaker Wolfgang Nejdl. We also want to express our strong gratitude to the EC-funded research project mEducator¹¹ for sponsoring the best paper award and to Talis¹² for contributing through sponsorship to the social dinner of the workshop. For the perfect organization of the latter we would like to thank Michael Mrissa (University of Lyon, France).

¹¹ <http://www.meducator.net/>

¹² <http://www.talis.com/>