LinkedUp Veni Competition:
Linked and Open Data for Education

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ABSTRACT
Linked Data is a set of well-defined principles for sharing of large datasets on the Web. 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. The LinkedUp Veni Competition, organised by the LinkedUp Project, is the first in a series of three competitions on tools and demos that analyse or integrate open web data for educational purposes.

1. INTRODUCTION
The Semantic Web has redefined itself throughout the last years as a Web of 'Linked Data'[1], 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 foundation of Linked Data is that data objects on the Web are identified by Web addresses (URIs), which can be referenced by a Web link, similarly as one would do with Web documents. This basic principle for easy discovery, reference, access and reuse of Web data is now gaining significant momentum in many different areas.

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[2], WordNet RDF[3] or the data.gov.uk initiative[4]. More recently, these approaches started to get adopted by education institutions, with Linked Data technologies being used to expose public information regarding course offerings, open educational resources and educational facilities in a readily accessible and reusable way. 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.

2. LINKEDUP PROJECT
The LinkedUp project[5] is an FP7 Support Action that seeks to explore and exploit open and linked data for education. This includes data with an explicit educational purpose, as well as other data and information that may not have an explicit educational remit, but can usefully be applied to an educational context.

LinkedUp conducts activities, including the establishment of three competitions and a corresponding evaluation framework. The latter will provide a general framework for evaluating all aspects of open Web data-driven applications. All activities aim at identifying and promoting innovative success stories that exploit large-scale Web data in educational scenarios as part of robust applications and tools.

Additional dataset curation activities are resulting in a repository and catalog of well-described and assessed datasets, which will support participants of the challenge, as well as interested data consumers and application developers in general. In addition, suitable use cases are being collected by the LinkedUp consortium and associated organizations.

3. VENI COMPETITION
The LinkedUp Veni Competition[6] is the first edition of three consecutive competitions (Veni, Vidi and Vici) looking for interesting and innovative tools and applications that analyse and/or integrate open web data for educational purposes. The competition was open to anyone who likes mashing up data or creating new and interesting tools and applications.

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[1]http://linkeddata.org/

[2]http://dbpedia.org/

[3]http://www.w3.org/TR/2006/WD-wordnet-rdf-20060619/

[4]http://www.data.gov.uk

[5]http://linkedup-project.eu/

[6]http://linkedup-challenge.org/veni.html

To support the competition, LinkedUp collected and cataloged data explicitly related to education, as well as related data that may be relevant, including useful Web media, user-generated content, Web lectures or academic publications. The data is made available through the Linked Education catalog[7] as well as through a data endpoint[8], where a SPARQL endpoint provides access to VoID[9] descriptions of currently included datasets.

4. SHORTLIST AND WINNERS

The Veni Competition received 22 submissions from 12 different countries, which offered innovative ideas in areas from mobile education, knowledge sharing and museum visits, to politics and sustainable development.

Our evaluation panel considered many aspects of the entries, including innovation, attractiveness and usefulness. They also looked at the relevance for education, the usability and performance of the tools, the data the entry uses or provides, and the way privacy and other legal aspects are dealt with.

The winners were announced at the Open Knowledge Conference - OKCon 2013[10], where the eight shortlisted submissions were presented during a dedicated session.

Third Place: **We-Share** - a social annotation application for educational ICT tools. We-Share can help educators to find tools to support teaching at all educational levels, and received high scores on educational innovation.

Second Place: **Globe-Town** - a 'fun to use' tool that lets users find out the most important trade partners, migrant populations and airline routes of their own countries. It also provides infographics on issues regarding society, environment and economy.

First Place: **Polimedia** - connects transcripts of the Dutch parliament with media coverage in newspapers and radio bulletins. Polimedia employs innovative information techniques and provides an attractive front-end that invites exploration and browsing.

The remaining shortlisted entries are:

- **DataConf** - a mobile mashup that enriches conference publications.
- **Knownodes** - enables defining and exploring connections between web resources and ideas
- **Mismuseos** - browse and explore the backgrounds and relations between objects from multiple Spanish museums.
- **ReCredible** - a browsable topic map with wikipedia-like content next to it.
- **YourHistory** - a Facebook app that shows historic events that are related to your own life.

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[7]http://datahub.io/group/linked-education
[8]http://data.linkededucation.org/linkedup/catalog/
[9]http://www.w3.org/TR/void/
[10]http://okcon.org/

Seven out of eight of the shortlisted submissions have submitted an extended version of their original submission, providing more details and background information. These papers are included in these proceedings of the LinkedUp Veni Competition.

5. ACKNOWLEDGEMENTS