OpenLearn and LRMI
Using metadata in RDFa Lite

OpenLearn (www.open.edu/openlearn/) offers free educational resources and modules for all from The Open University. We set out to develop OpenLearn metadata following the principles of the Semantic Web using RDFa Lite (W3C, 2012)[i] as Learning Resource Metadata Initiative (LRMI) metadata to describe our assets. LRMI is a schema.org initiative that 'aims to make it easier to publish, discover, and deliver quality educational resources on the web' (LRMI, 2012)[ii].

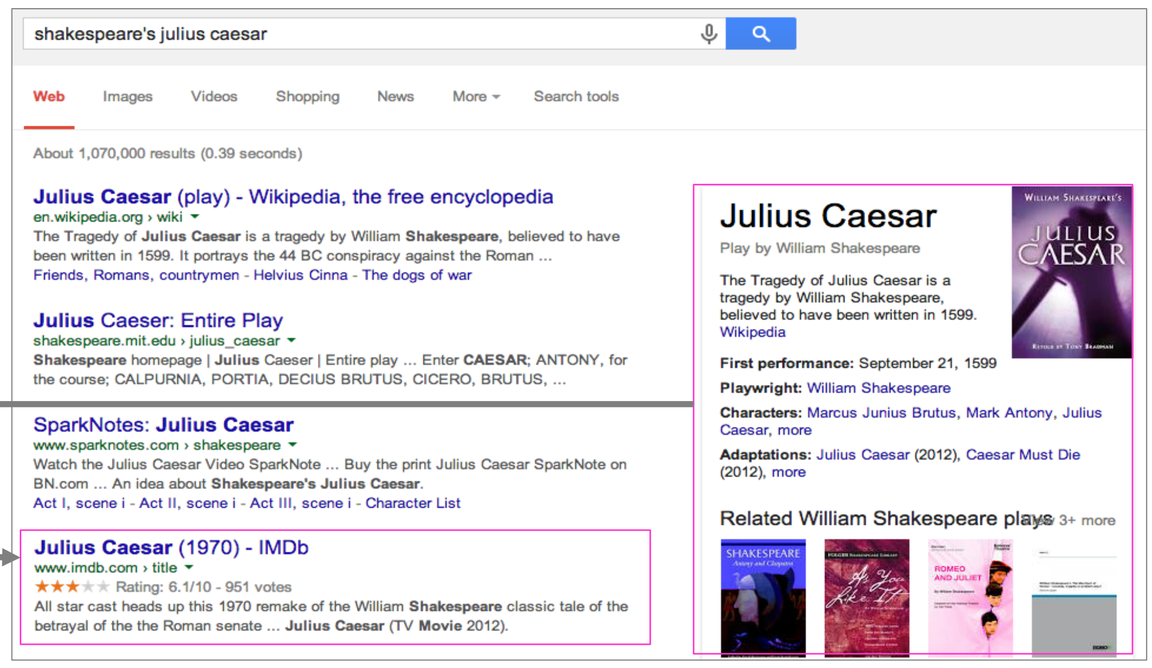

```
<span property="schema:educationalAlignment" typeof="schema:AlignmentObject">
  <span property="schema:alignmentType" content="educationalLevel">
    <span property="schema:targetDescription">Introductory Level</span>
```

OpenLearn OER

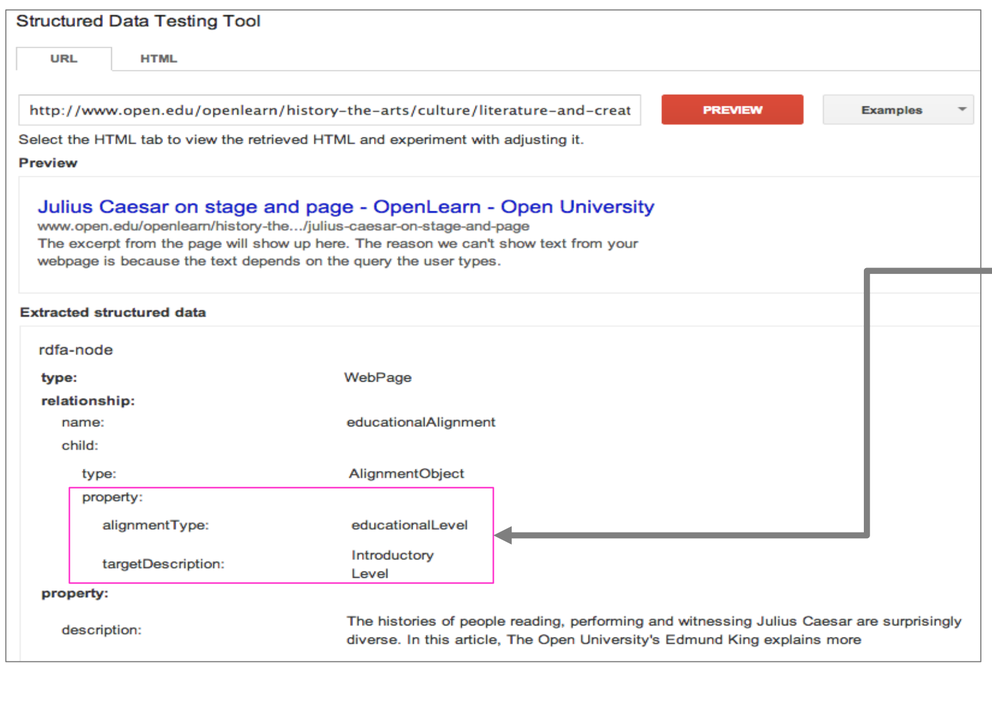
- schema.org is a collection of metadata tags that can be added to web pages which allows search engines to bring back enhanced search results
- We used LRMI-based schema.org metadata encoded in RDFa Lite to mark-up educational web content, unlike other LRMI example datasets which have used microdata to encode their content
- RDFa Lite and microdata are used to describe specific types of information such as reviews, events, people, recipes, videos, music or product listings.
- OpenLearn chose to use RDFa Lite because it is fully compatible with Semantic Web principles.

Rich snippets

- Schema.org enables 'Rich snippets', which give users quicker access to information about resources that have been encoded in microdata or RDFa Lite.
- The example shows structured information returned by a search, including:
  - *Descriptive information about the play*
  - *When it was first performed*
  - *Playwright and main characters*
  - *Adaptions*
  - *Other plays by the same author*
  - *Review ratings*
- The use of rich snippets is widely reported[iii] to significantly increase user selection of a search result.



Snippets testing tool



- This tool (www.google.com/webmasters/tools/richsnippets) exposes the RDFa/microdata encoding of your web page.
- An open educational resource (OER) can be refined by:
  - ***Educational level***
  - *Subject/keywords*
  - *Date of publication*
  - *Educational use*
  - *Duration of study*
- Provides the learner with a better idea of what to expect from the resource.

Linked Data

- Linked Data creates relationships between structured information, connecting resources with each other in a 'web of data'.
- RDF Lite adds semantic information web pages, allowing us to share, reuse and combine our OpenLearn material with other Linked Data repositories and web sites.
- For instance, DiscOU (http://discou.info/), is an OU browser add-on that pulls in OpenLearn and iTunes U content based on semantic similarity.
- Linked Data allows us to create pathways between external sites, OpenLearn resources and the modules we offer, encouraging uptake of our qualifications, and facilitate student journeys from informal to formal learning.

[i] W3C, 2012. RDFa lite 1.1, W3C Recommendation 07 June 2012 [online]. W3C. Available from: http://www.w3.org/TR/rdfa-lite/ (Accessed 24 January 2014).
[ii] LRMI, n.d. LRMI Learning Resource Metadata Initiative, About the LRMI [online]. LRMI. Available from: http://www.lrmi.net/about (Accessed 24 January 2014).
[iii] Blacquiere, Eduard., 2011. Higher efficiency through Google Rich Snippets [Online]. Emerce. Available from: http://www.emerce.nl/cases/hoger-google-rendement-door-rich-snippets?t=1320059851 (Accessed 11 April 2014).