



OER Impact: Collaboration, Evidence, Synthesis

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The Open University

The Open University







Structure

OER Research Hub Collaborative Research **Evidence Model** Synthesis: Mapping and Curation **OER Impact Map**



OER Research Hub



- Research project at The Open University (UK)
- Funded by William & Flora Hewlett Foundation for two years
- Research team led by two professors
- Tasked with building the most comprehensive picture of OER impact
- Organised by eleven research hypotheses
- Collaboration model works across different educational sectors
- Global reach but with a USA focus



oerresearchhub.org #oerrhub

Rationale



- Consolidatory phase for OER movement after years of investment and piloting
- The need for an evidence base: advocacy, strategy, policymaking
- Lack of robust evidence for OER impact
- The evidence 'problem' in OER impact research
- Isolated 'pockets of innovation'
- No agreement over best methods for impact comparison
- Compare diverse experiences to assess the influence of 'open'
- Mixed methods data from experimental + non-experimental research



Collaboration Developing an ecology of sharing





























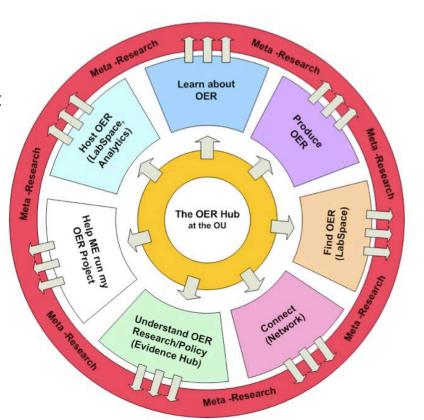






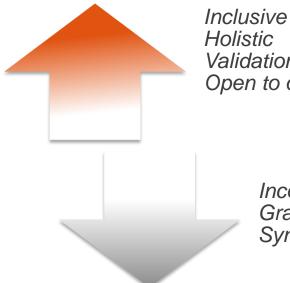
Research Process

- Research instruments applied consistently across collaborations: surveys, interview questions, focus groups, etc.
- Supplemented by integration of secondary research
- 'Agile' research, sprinting
- Thematic and methodological cohesion provided by research hypotheses





Practical Advantages / Methodological Disadvantages



Inclusive
Holistic
Validation of experiences at the 'cutting edge'
Open to diverse perspectives

Incommensurability? Granularity? Synthesis? How will comparison of experiences be made rigorous?



Hypotheses Key claims about open education

'Evidence' is only evidence in relation to a claim or hypothesis: the project hypotheses form the core of the metadata model.

Keyword	Research Hypothesis
Performance	OER improve student performance/satisfaction
Openness	People use OER differently from other online materials
Access	OER widen participation in education
Retention	OER can help at-risk learners to finish their studies
Reflection	OER use leads educators to reflect on their practice
Finance	OER adoption brings financial benefits for students/institutions
Indicators	Informal learners use a variety of indicators when selecting OER
Support	Informal learners develop their own forms of study support
Transition	OER support informal learners in moving to formal study
Policy	OER use encourages institutions to change their policies
Assessment	Informal assessments motivate learners using OER

Evidence Model Design for information architecture

Key Questions for Evidence Model



What evidence exists to support key claims about OER?

How do patterns of OER impact differ across countries?

How do patterns of OER impact differ according to sector?

How can the veracity of evidence be checked?

How can diverse evidence forms be meaningfully collected together?



Evidence: Information Architecture



Title	• Text
Сору	Text / HTML - Supports embedding of multimedia
Hypothesis	Association of evidence with hypothesis
Polarity	 Evidence is either +ve/-ve in relation to a hypothesis
Location	Geolocation
Sector	School (K12) / College / Higher Education / Informal
Citation	Academic citation or Hyperlink / URL

OpenLearn Survey (July 2013)

Evidence Records

Polarity: -ve | Sector: Informal | Country: United Kingdom | Hypothesis: C - Access

Findings from the 2013 OpenLearn survey (collection point 1 July 2013) indicate that

OpenLearn OER are not really widening according and tend to be employed. Only 69 qualifications. In contrast, 26% (n=227) ind level and a further 20% (n=178) that they employment, 58% (n=504) of respondents in

Open online courses completion rate approximately 7%

\$3.7 million of savings for OpenStax users

Polarity: +ve | Sector: College | Country: United States | Hypothesis: F - Finance

Free textbook publisher OpenStax College today announced that nearly 300 education institutions on four continents will use OpenStax textbooks for the coming school year.

"Our adoptions have almost doubled in the past four months, and we estimate we'll save abd 40,000 students more than \$3.7 million in the coming school year," said Richard Baraniu founding director of the Rice University-based publisher.

NEW: The Impact of a Free Book



professional-grade textbooks,



Informal | Country: United Kingdom | Hypothesis: C - Access

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Offer of university credit for MOOC course has no takers

Polarity: -ve | Sector: College | Country: United States | Hypothesis: C - Access

The Chronicle of Higher Education reported that when Colorado State University-Global Campus became the first college in the United States to grant credit to students who passed a MOOC students showed no interest despite the fact that they could have achieved college credits equivalent to \$1,050 for just \$89.

Citation: http://chronicle.com/article/A-Universitys-Offer-of-Credit/140131/

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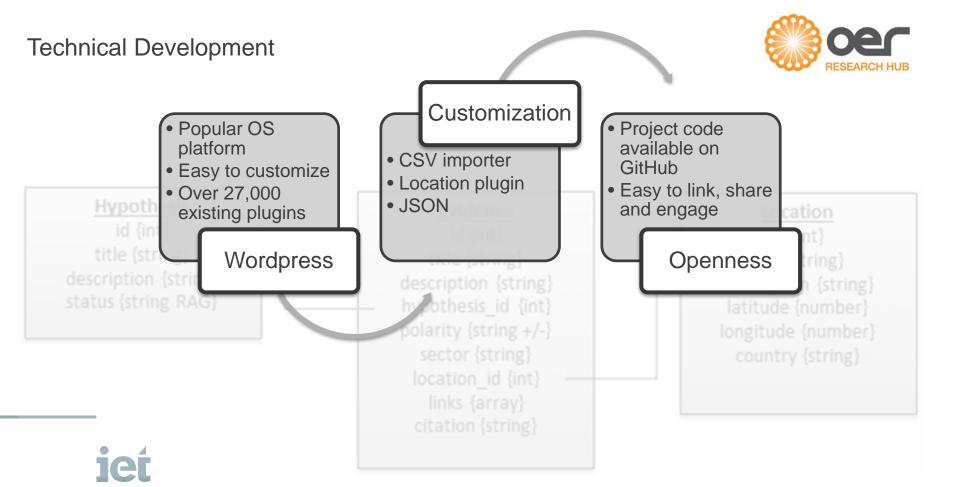
Evidence Records

Support embedding

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Technical Development



- Popular OS platform
- Easy to customize
- Over 27,000 existing plugins

Wordpress

- Customization
- Location plugin

othesis id (int)

• JSON

- Project code available on GitHub
- Easy to link, share and engage

Openness



Martin Hawksey

@mhawksey FOLLOWS YOU

Innovation & Technology. Interested in EdTech, Mashups, Google Apps Script, Social Networks, Data Mining/Wrangling, cMOOCs, Open Education, DDJ, SEO ...

Edinburgh, Scotland · mashe.hawksey.info



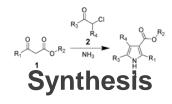
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Synthesis Methods

- Isolating data by hypothesis, sector, country, or any combination
- Collaborative curation of research data
- Data visualization, reporting
- Editorial quality control exercised centrally

Validation

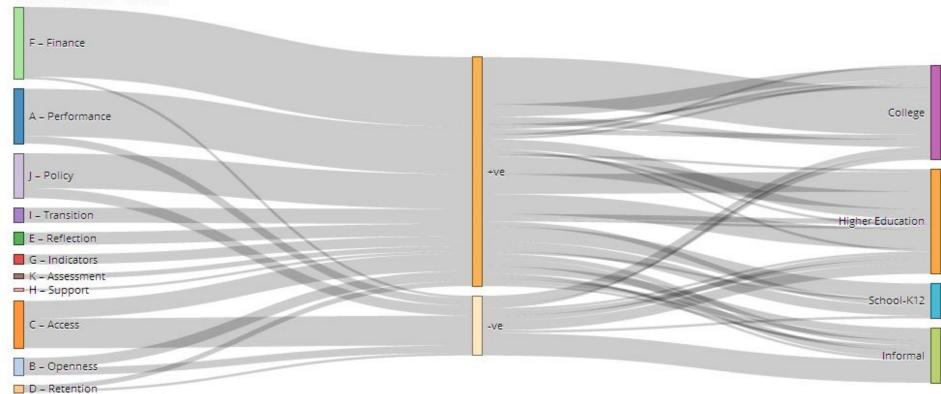
- Iteration through current and future patterns of evidence
- Open citation trails allow public auditing of evidence
- Community voting



Synthesis Mapping and curation



Evidence flow - World



OER Impact Map oermap.org

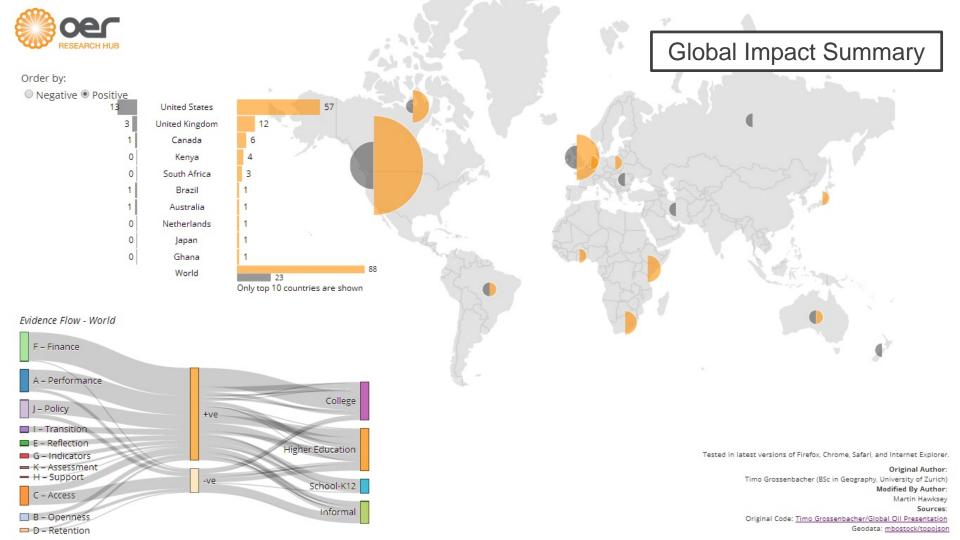
OER Impact Map: Maps

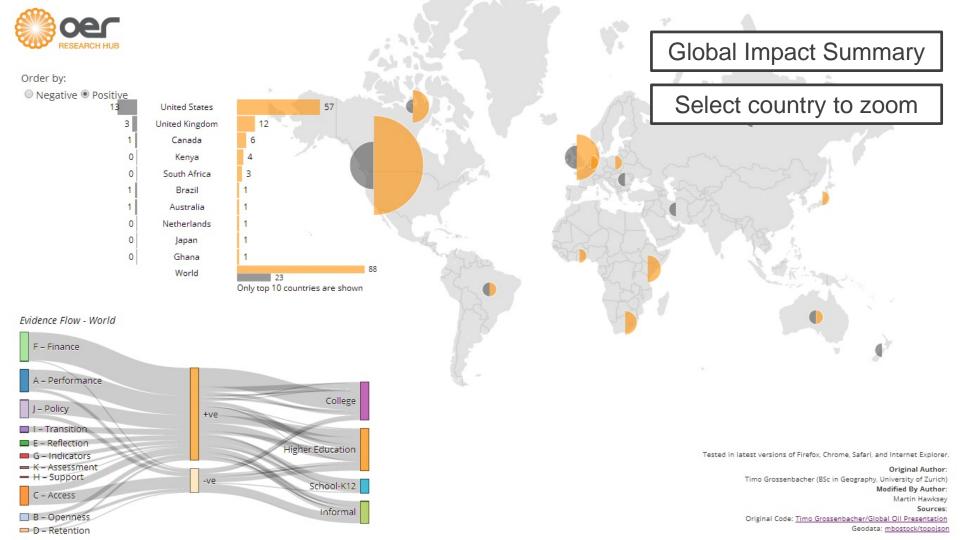




- Country Summary Map evidence nodes organized by country
- OER Project Map OER initiatives and projects around the world
- OER Evidence Map all impact evidence is categorized according to the OER Research Hub hypotheses
- OER Policy Map is the single largest curated collection of OER policies
- OER Impact Map aggregates the other maps
- Tweetmaps show a geographical summary of tweets for a particular Twitter hashtag. E.g. #oermap for outreach; #oerrhub for tracking project activity.
- Maps by others

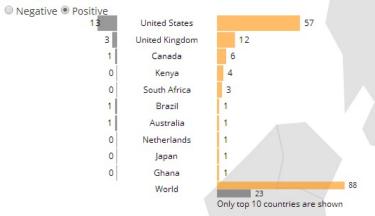






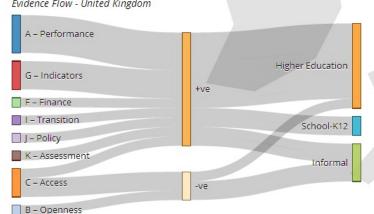






Flowmap changes according to country selected...

Evidence Flow - United Kingdom



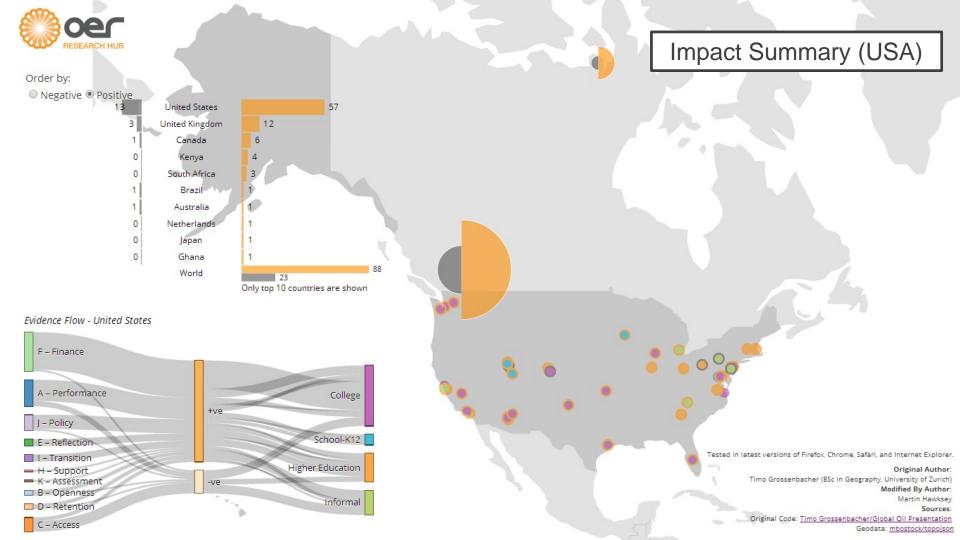
Tested in latest versions of Firefox, Chrome, Safari, and Internet Explorer.

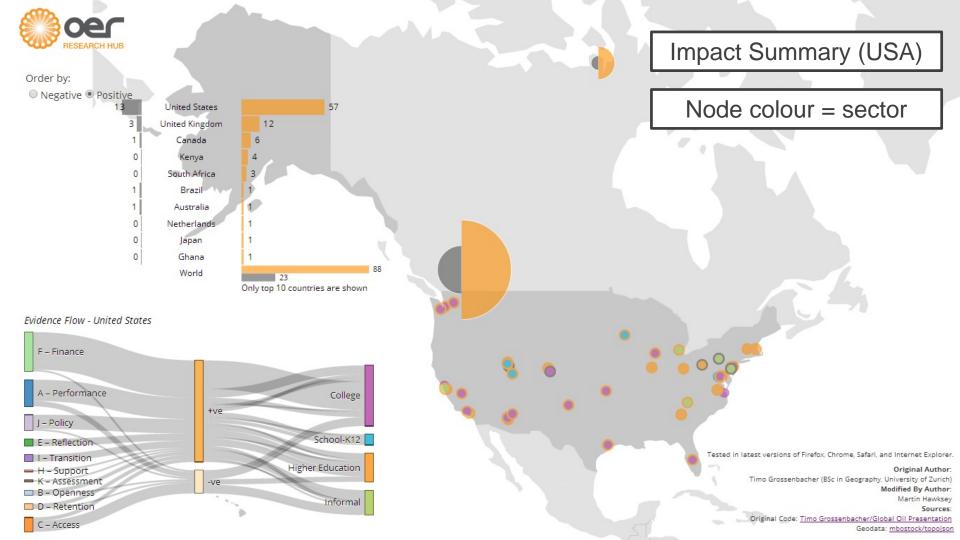
Timo Grossenbacher (BSc in Geography, University of Zurich) Modified By Author:

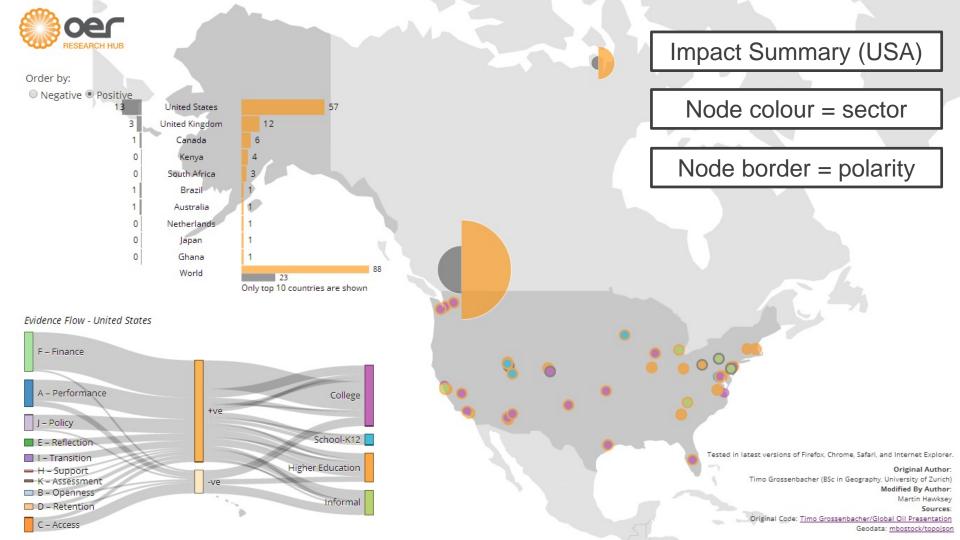
Martin Hawksey

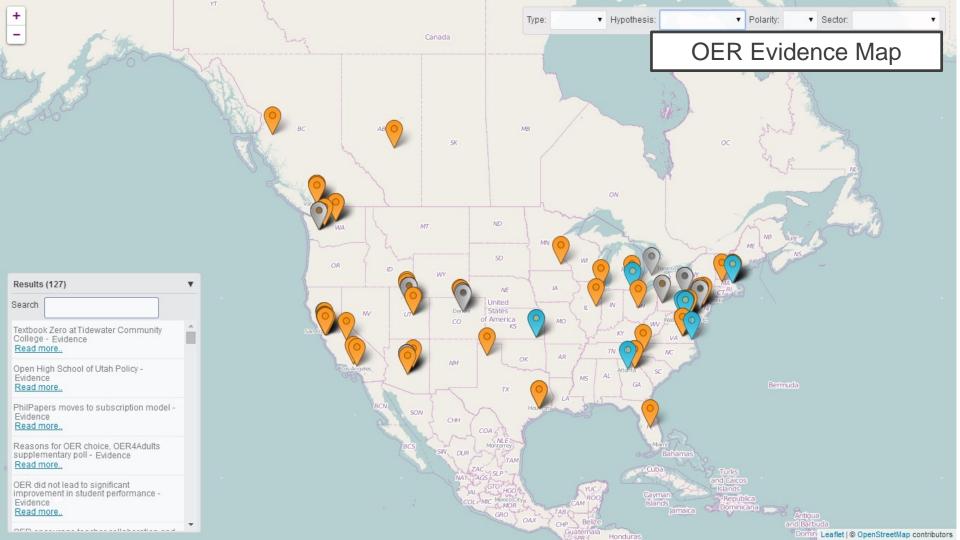
Original Code: Timo Grossenbacher/Global Oil Presentation

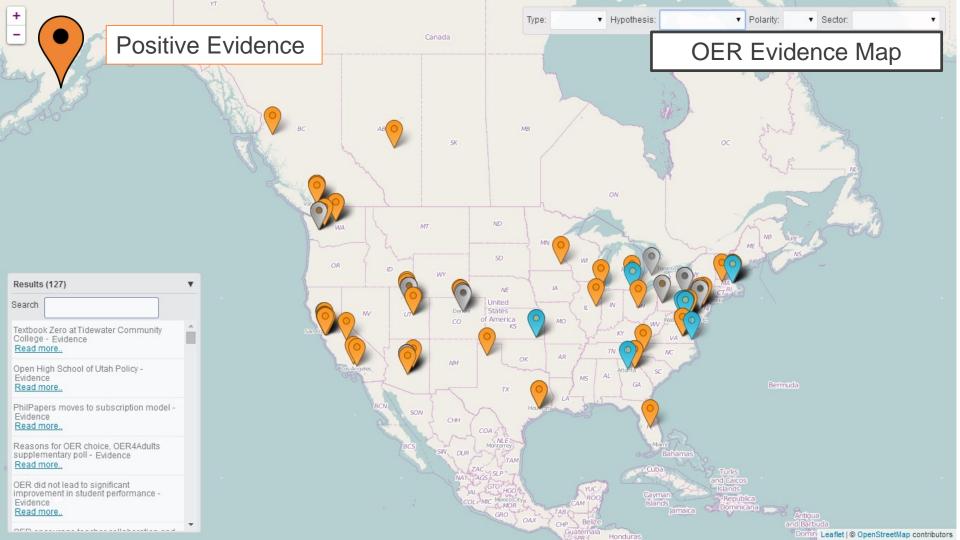
Geodata: mbostock/topojson

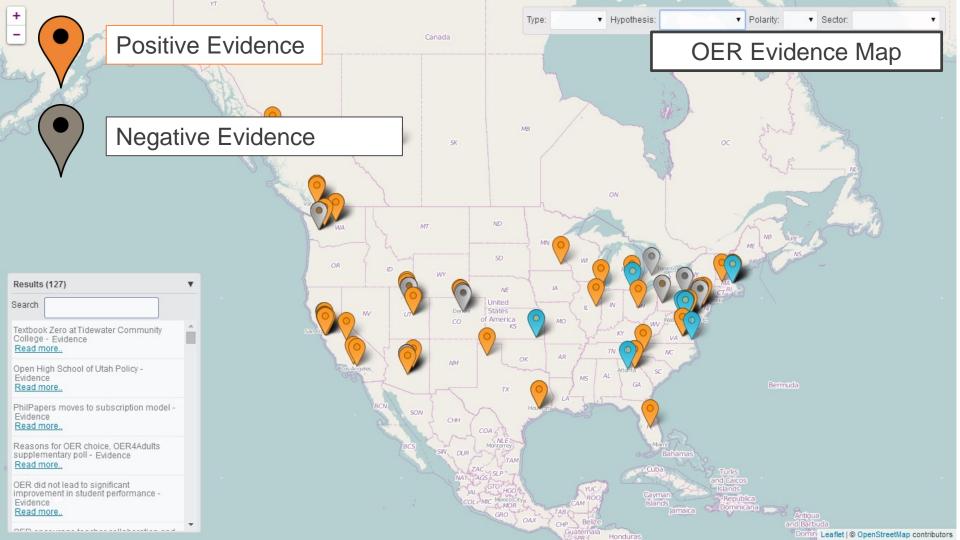


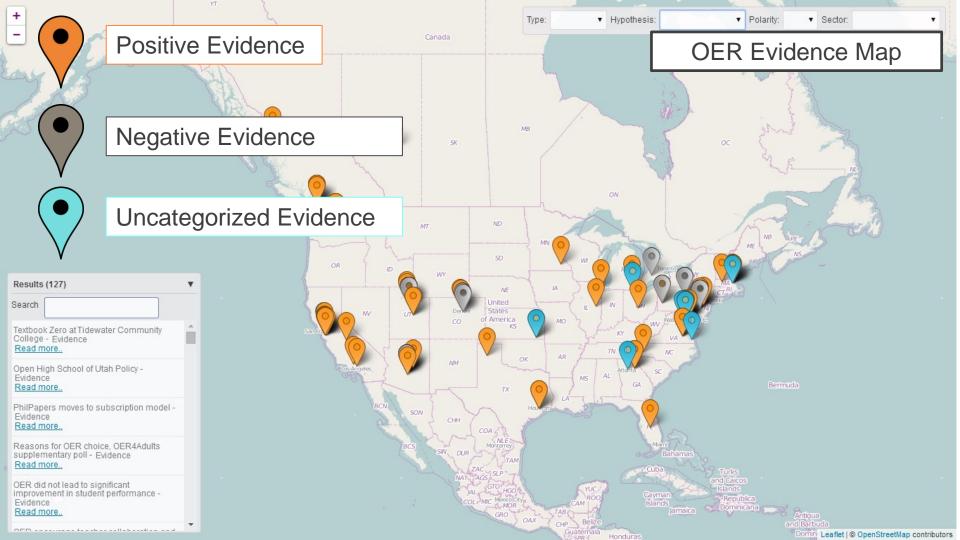


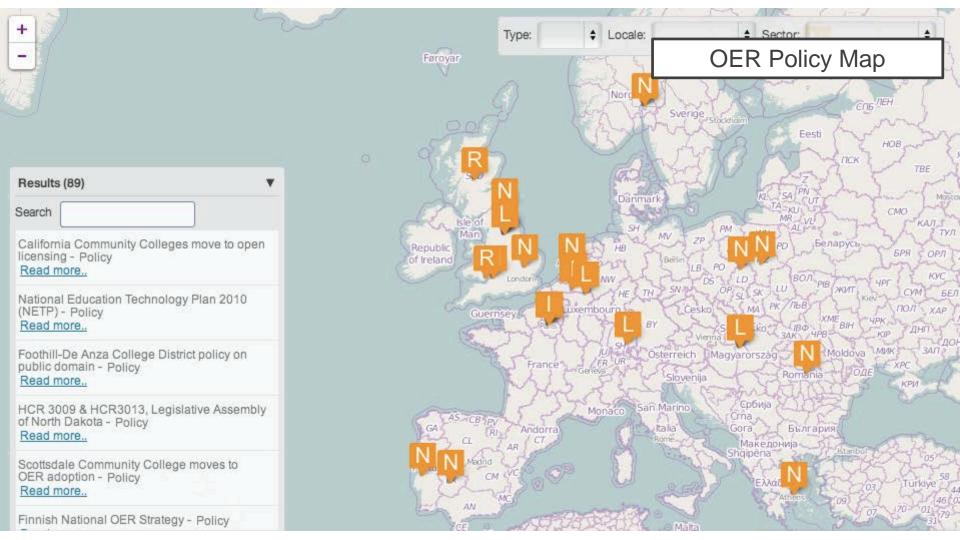


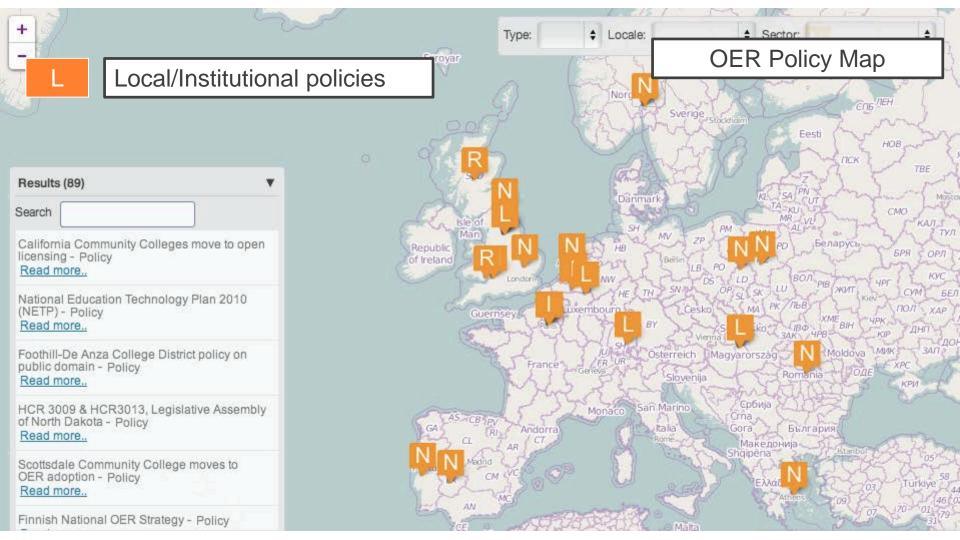


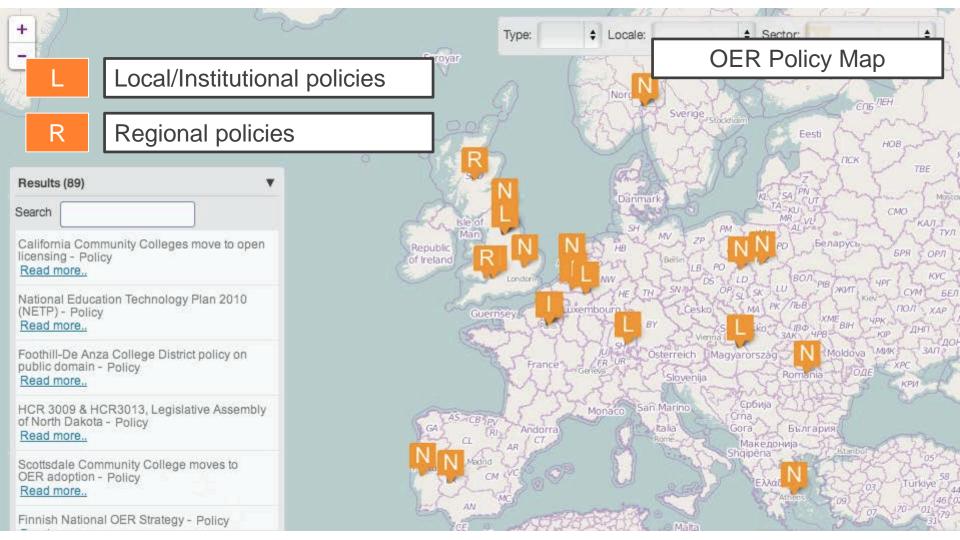






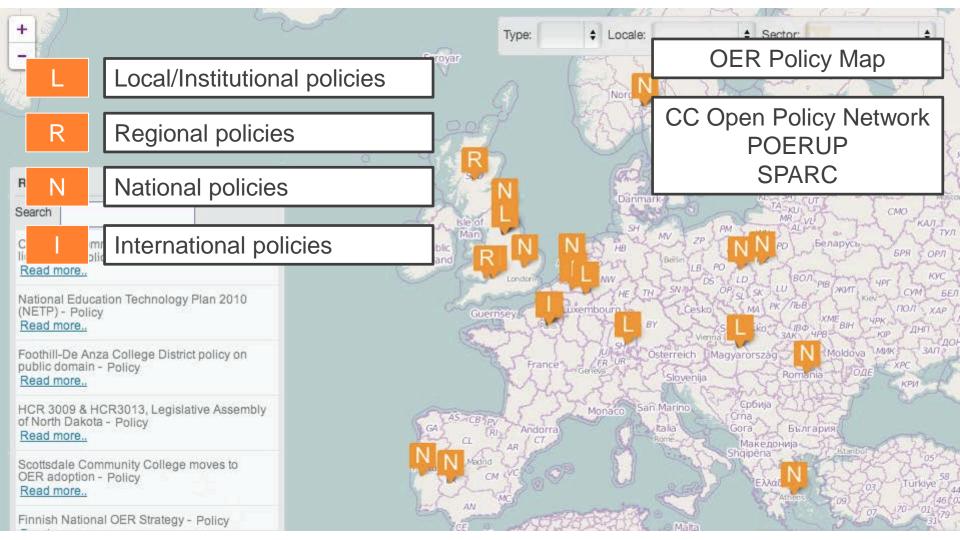


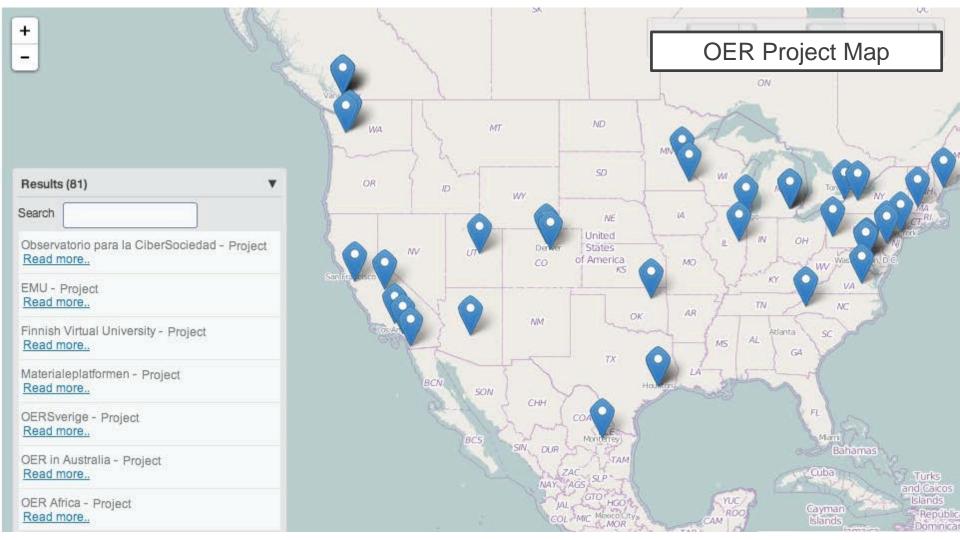














OER Projects

Results (81)

Search

Observatorio para la CiberSociedad - Project Read more..

EMU - Project Read more..

Finnish Virtual University - Project Read more..

Materialeplatformen - Project Read more..

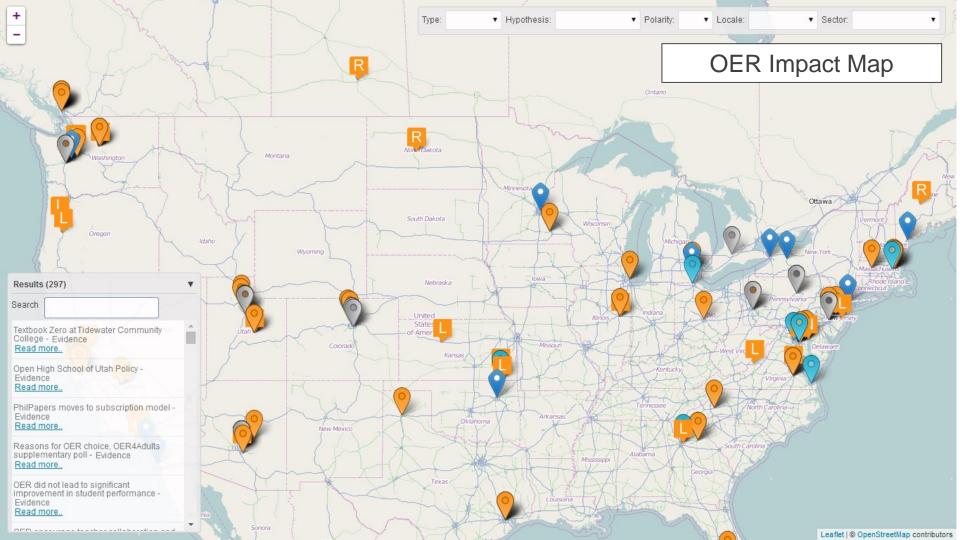
OERSverige - Project Read more...

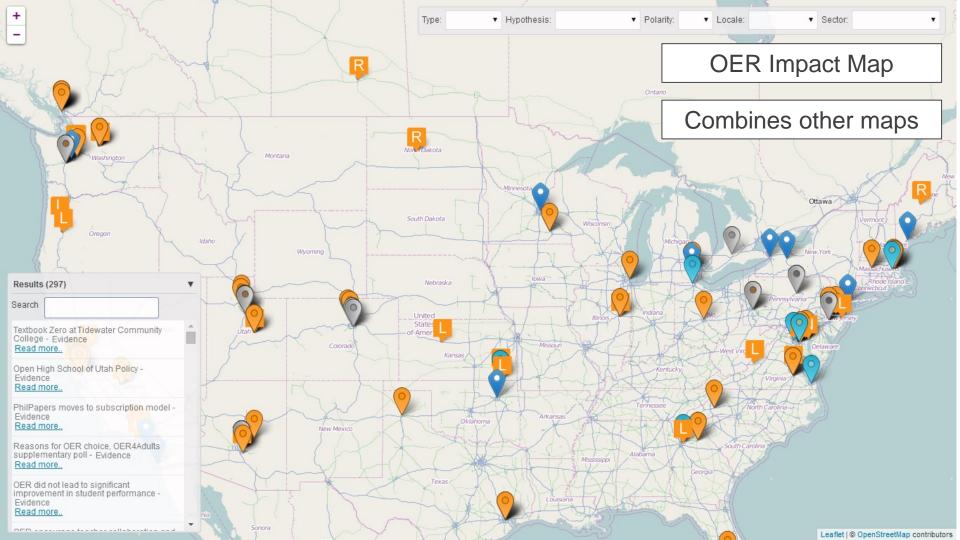
OER in Australia - Project Read more..

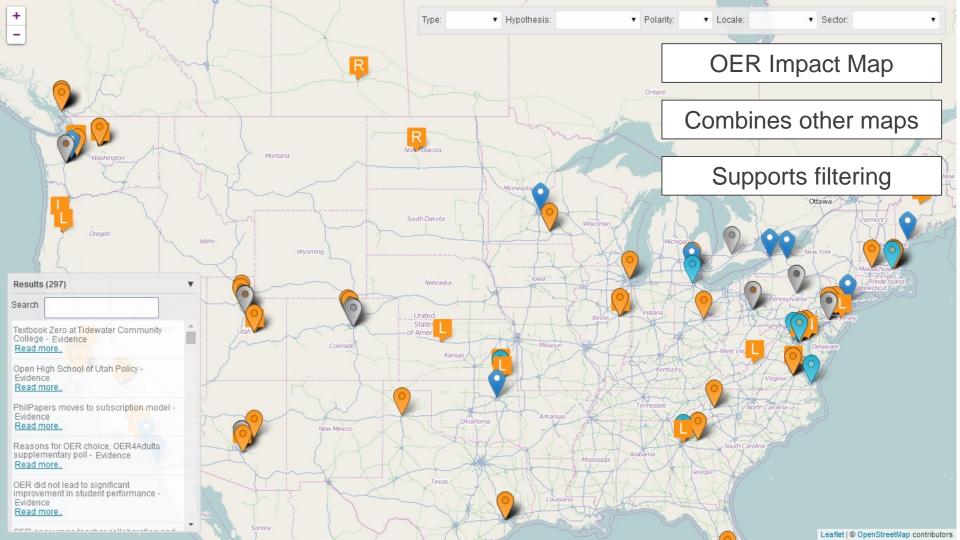
OER Africa - Project Read more..



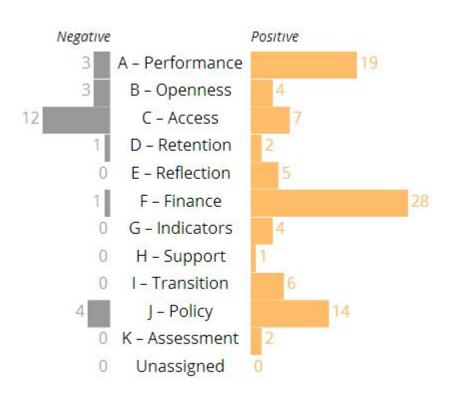








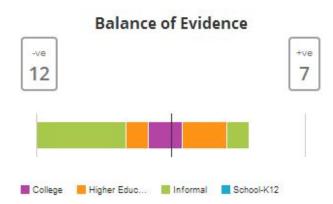
Hypothesis Reporting



Hypothesis Reporting

Sector Breakdown (-ve)

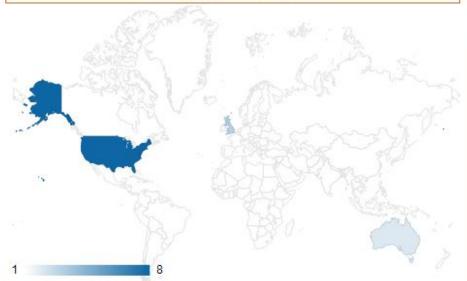
School-K12	Informal	Higher Education	College
0	8	2	2



Sector Breakdown (+ve)

School-K12	Informal	Higher Education	College
0	2	4	1

Geographical Report



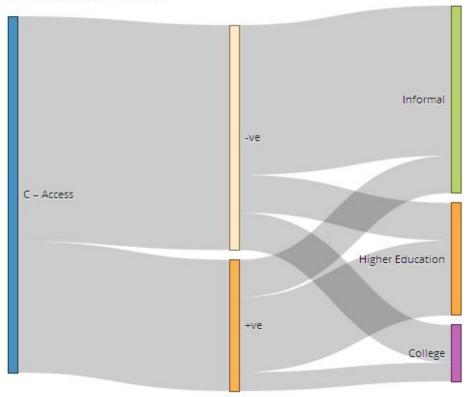
Fil	ter	map):

Total ▼

Country	Negative	Positive	Total v
United States	6	2	8
United Kingdom	2	1	3
Australia	1	1	2
	1	1	2
Russian Federation	1	0	1

Flowmap

Evidence flow - World



Click on the table or map above to filter the flow diagram

Key Questions

Highlighted Evidence

Can OER improve access to education?

- · Widening access through the African Virtual Campus
- How does the profile of OER users compare with learners in traditional contexts?

Popular evidence against (-ve)

- MOOC students are educated, employed, and male (+2 rating, 2 votes)
- Offer of university credit for MOOC course
 has no takers
 (+1 rating, 1 votes, rated)
- OpenLearn Users: 46% of Learners Have Higher Education Qualifications
 (+1 rating, 1 votes)
- University of Pennsylvania survey reveals that majority of MOOC participants have college degrees
 (+1 rating, 1 votes, rated)

Most Viewed Fyidence

- Study identifies a widening "language gap" between OER discussions in English and other languages - 101 Views
- MOOC students are educated, employed, and male - 69 Views
- Poor uptake of open textbooks in Washington community colleges - 30 Views
- Widening access through the African Virtual Campus - 27 Views
- Offer of university credit for MOOC course has no takers - 26 Views

Popular evidence for (+ve)

- Open Textbooks Improve Access to Educational Materials

(-1 rating, 1 votes, rated)

Summary



- A collaborative approach to OER research is recommended
- OER Impact Map is a tool designed for the needs of the open community
- Open methods for researching openness: openly licensed instruments; remix and reuse data; working openly; sharing
- Takeaway message: the whole is greater than the sum of the parts



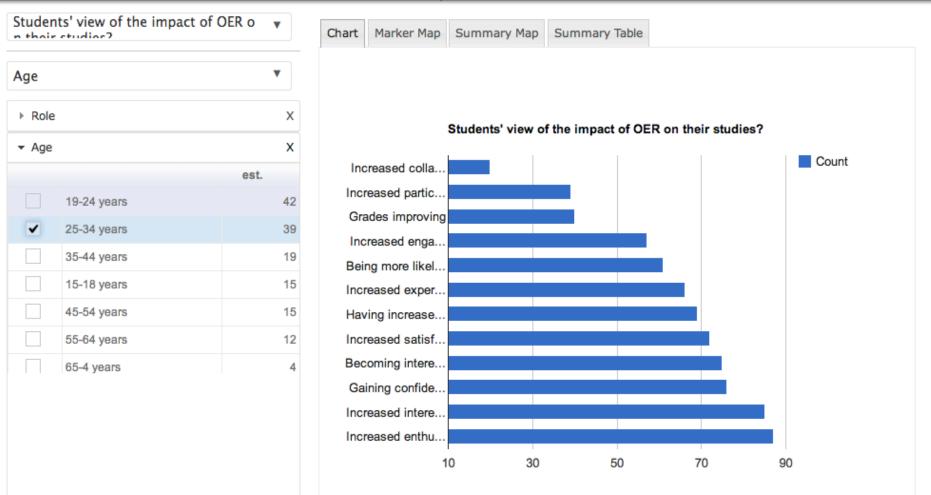
Next Steps



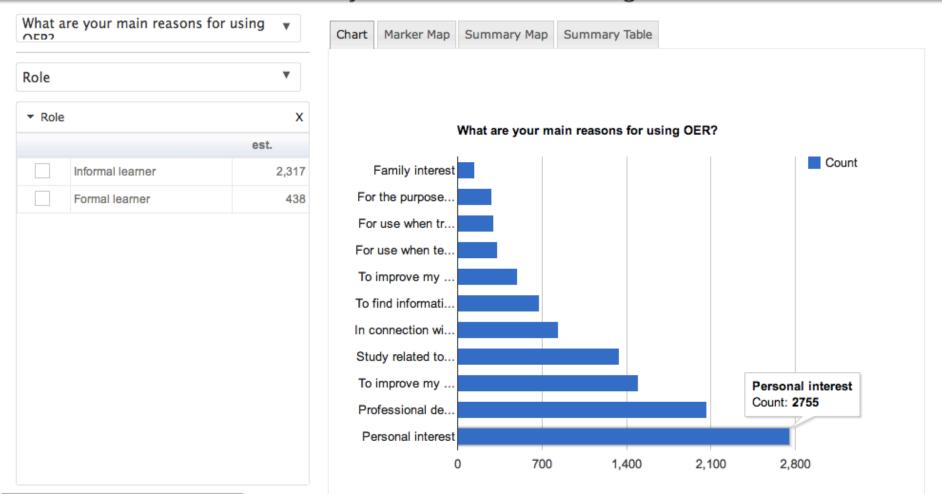
- Adding qualitative data analysis to evidence base
- Increasing the evidence base through desk research
- Plan for final phase of map development
- Case studies
- New collaborations?
- New hypotheses?
- School of Open course on open research; Open Data; CC-BY research tools
- Survey data 'exploration tool'



Survey Data Explorer (prototype)



Survey Data Explorer (prototype)



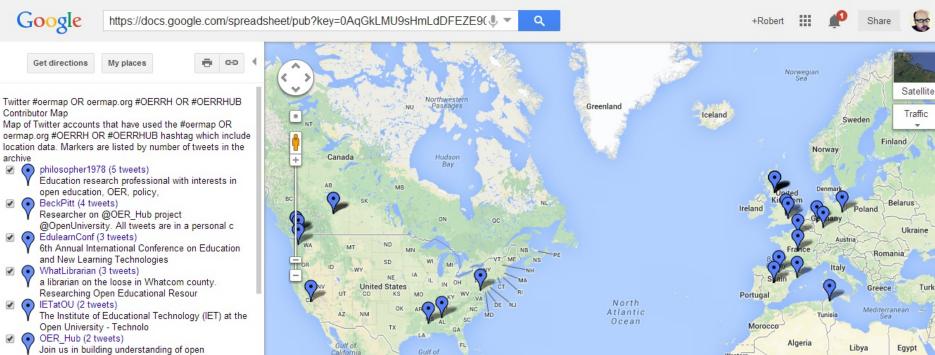
Survey Data Explorer (prototype)











Puerto

Bolivia

Caribbean

Mexico

Libya

Chad

DR Congo

Map data @2014 Google, INEGI - K

Niger

Nigeria

Western

Sahara

Mauritania

Burkina Faso.

Ghana

Egypt

Sudan

South Sudan

Tanzania



#wiki. Founder of #EdchatDE A

We want to put you on the map!

So let us know about OER activity and impact in your institution



Join us in building understanding of open education

Thanks for listening! oerresearchhub.org oermap.org rob.farrow@open.ac.uk @philosopher1978