OER Impact: Collaboration, Evidence, Synthesis

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The Open University
Structure

OER Research Hub
Collaborative Research
Evidence Model
Synthesis: Mapping and Curation
OER Impact Map
please tweet to #oermap
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
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.

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

OpenLearn Survey (July 2013)


Findings from the 2013 OpenLearn survey (collection point 1 July 2013) indicate that OpenLearn OER are not really widening access to higher education. Only 6% (n=91) of respondents qualified and tend to be employed. Only 69% (n=227) included level and a further 20% (n=178) that they were employed, 78% (n=504) of respondents in higher education.

Open online courses completion rate approximately 7%

$3.7 million of savings for OpenStax users


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 about 40,000 students more than $3.7 million in the coming school year,” said Richard Baraniuk, founding director of the Rice University-based publisher.

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-University’s-Offer-of-Credit/140131/
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Citation: http://chronicle.com/article/A-Universities-Offer-of-Credit/149131/
Popular OS platform
Easy to customize
Over 27,000 existing plugins

Wordpress

Customization

- CSV importer
- Location plugin
- JSON

Openness

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

- Popular OS platform
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**Wordpress**

- CSV importer
- Location plugin
- JSON

**Customization**

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

**Openness**

**Martin Hawksey**

@mhawksey  FOLLOW YOU

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

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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
OER Impact Map
oermap.org
OER Impact Map: Maps
oermap.org

• *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…
Impact Summary (USA)

Node colour = sector

Node border = polarity
Positive Evidence

Negative Evidence

OER Evidence Map

Results (127)
Search

Textbook Zero at Tidewater Community College - Evidence
Read more...

Open High School of Utah Policy - Evidence
Read more...

PhilPapers moves to subscription model - Evidence
Read more...

Reasons for OER choice, OER4Adults supplementary poll - Evidence
Read more...

OER did not lead to significant improvement in student performance - Evidence
Read more...
Local/Institutional policies
Local/Institutional policies
Regional policies
National policies
OER Policy Map

- Local/Institutional policies
- Regional policies
- National policies
- International policies
OER Impact Map
Combines other maps
Supports filtering
Hypothesis Reporting

Negative

A - Performance: 3
B - Openness: 3
C - Access: 12
D - Retention: 0
E - Reflection: 0
F - Finance: 1
G - Indicators: 0
H - Support: 0
I - Transition: 0
J - Policy: 4
K - Assessment: 0
Unassigned: 0

Positive

A - Performance: 19
B - Openness: 4
C - Access: 7
D - Retention: 2
E - Reflection: 5
F - Finance: 28
G - Indicators: 4
H - Support: 1
I - Transition: 6
J - Policy: 14
K - Assessment: 2
Unassigned: 0
Hypothesis Reporting

Sector Breakdown (-ve)

<table>
<thead>
<tr>
<th>School-K12</th>
<th>Informal</th>
<th>Higher Education</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
<td>2</td>
<td>2</td>
</tr>
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</table>

Balance of Evidence

- ve 12

+ ve 7

Sector Breakdown (+ve)

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Key Questions

- Can OER improve access to education?
- How does the profile of OER users compare with learners in traditional contexts?

Highlighted Evidence

- Widening access through the African Virtual Campus

Popular evidence against (-ve)

- MOOC students are educated, employed, and male (+2 rating, 2 votes)
- Poor uptake of open textbooks in Washington community colleges (+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 Evidence

- 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)

- Widening access through the African Virtual Campus (+1 rating, 1 votes, rated)
- 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’
What are your main reasons for using OER?

- Family interest: 2,317
- For the purpose of: 419
- For use when teach: 401
- To improve my: 400
- To find information: 354
- In connection with: 347
- Study related to: 344
- Personal interest: 2,755
- Professional development: 2,108
Survey Data Explorer (prototype)

Do you consider yourself disabled? If yes, what is the nature of your disability?

Age

- Role
- X

- Age
- X

- 25-34 years
  - 1,156
- 35-44 years
  - 896
- 45-54 years
  - 735
- 19-24 years
  - 685
- 55-64 years
  - 392
- 15-18 years
  - 192
- 65-74 years
  - 135
- Over 74 years
  - 34
- Under 15 years
  - 34
- no value
  - 29
tweetmap

tiny.cc/oermap

#oermap
Twitter #eemap OR oemap.org #OERRH OR #OERRHUB

Contributor Map
Map of Twitter accounts that have used the #eemap OR oemap.org #OERRH OR #OERRHUB hashtagging which include location data. Markers are listed by number of tweets in the archive.

- philosopher1978 (5 tweets)
- Education research professional with interests in open education, OER, policy,
- BeckPitt (4 tweets)
- Researcher on @OER_Hub project
- @OpenUniversity. All tweets are in a personal context.
- EdulearnConf (3 tweets)
- 6th Annual International Conference on Education and New Learning Technologies
- WhatLibrarian (3 tweets)
- a librarian on the loose in Whatcom county.
- Researching Open Educational Resources
- JETaOU (2 tweets)
- The Institute of Educational Technology (IET) at the Open University - TechnoLearn
- OER_Hub (2 tweets)
- Join us in building understanding of open education
- View Profile Twitter | View
- 20MillionMinds (1 tweets)
- Dedicated to bringing #HigherEd into the digital age
- #20MM & its initiatives
- ADEA_ICT (1 tweets)
- View Profile Twitter | View #eemap OR oemap.org #OERRH OR #OERRHUB convograp
- A_Burkhardt (1 tweets)
- Geschäftsführerin von digitales ABC, der Plattform für digitale Bildung
- KristinePlatow (1 tweets)
- Librarian interested in copyright, licensing, open education resources, teaching
- Tastenspieler (1 tweets)
- #lm21 educator #lecturer #musician #oer #ipad
- 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