From content curation to Open Educational Practices: experiences in a medical curriculum

OER17 conference, London, April 5/6 2017

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Nijmegen – the Netherlands
Introduction
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SIG Open Education SURF

PhD researcher Global OER Graduate Network
http://go-gn.net

Governance for open education ecosystems in healthcare
Re-using OERs in a medical curriculum

- More focus on publishing OER, less on reuse
- Jungle of repositories is not teacher friendly
- Teachers don’t have time for searching, checking out OERs
- How do we know the OER has quality?
- From OERs to OEP: support services needed

There is a lot out there, how can we help?

- Content Curation, website, setting up services
- From OER to OEP... what do teachers need to start reusing?
- Innovators ... ... early adopters ...... early majority?
Content Curation

Content curation is the process of sorting through the vast amount of content on the web and presenting it in a meaningful and organized way around a specific theme.

_Sifting, sorting, arranging, publishing_

Beth Kanter, A content curation primer
http://bethkanter.org/content-curation-101

→ Added value
Reuse of OERs in medical Bachelor curriculum

• Part of curriculum reform
• Self directed learning

1. Recommended literature >> recommended OERs for each course

2. Remedial follow up after formative progression test

3. In 10% free choice offer OCW/MOOCs (local teacher, coaching sessions, question hour, assignments, own assessment)

4. Team Based Learning in clinical topics > finding the right sources

5. Minor

6. Short courses

7. Master (evidence, open science)
COCURA: Content Curation and Application

- 8 UMC’s in NL
- Long tradition of sharing e-learning: www.medischonderwijs.nl → 1500 resources
- Working together, sharing the workload
- Differences in tempo and focus
  - Innovators and followers
  - Policy or not?
  - Starting point curriculum innovation
  - Starting point teacher professionaliation
  - Starting point students
- Exchanging OEPs
- Shaping a Community

- Program rather than project, 5 years
- Collaboration with NVMO professional association
OpenMed: Students and staff as co-creators of an OER learning framework in medicine and health care

In medicine and the health care professions there are substantial numbers of OERs and other open access resources. However, these resources may be difficult to find, and the learner is frequently uncertain about the quality and context of the material. OpenMed (http://openmed.co.uk/) is a learning framework to curate these resources. It is being co-created by our undergraduate medical students and staff for the benefit of students, trainees and educators in medicine and health care professions. A key element to facilitate development is the involvement of all our medical students, who we encourage to take some responsibility and ownership. For any student, this can be a minor role offering suggestions of suitable resources, or a more significant role, as an author or curator, or creator of new materials. Students can establish teams to take responsibility for a topic, which may be part of their formal curriculum as a Student Selected Component, or informally, perhaps within a student medical subject society. This medical school is currently undergoing significant change in delivery of its teaching content. It is developing many more online resources, which are being created as OERs and will eventually form the backbone of our own curriculum, as well as being curated in OpenMed. All resources are assessed by learners and educational and subject experts. Each resource is placed within the learning framework, tagged with a measure of its quality, a short description, a stratification indicator for the learner’s level of expertise, and how long it will take to undertake. Throughout, students work with experts to curate the resource. This curation process also raises wider questions to discuss: Who owns co-created content? Who owns resources where significant value is added to existing materials in a curation process?
Content Curtation? Crunching numbers

4 students (3rd & 4th year)

700 hours

14000 OER, OCW, open textbooks, MOOCs, other

3 min/resource average (10-14 min for “good” resources)

2660 passed first round → 19%

20..130 per medical specialism

0..25 per specialism suitable for reuse in curriculum

3..7% (?) reuse possibility estimated (340..980)
Wordle curated descriptions
The content curation process

Repositories, listings, collections, other sources
- OER, OCW, MOOC, OTB, other

Around 70 places on the web

1st curation round: 4 students, 700 hours
Selection: inclusion/exclusion criteria – metadata/paradata

Database, reports, website prototype
Data cleaning

2nd curation round: teachers/doctors
20..130 resources per specialism

OEP: implementation in curriculum
Reused, Enriched or redesigned content

Updating, scaling up
National cooperation, Youtube/vimeo
The content curation process

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Criteria:
- NL, EN
- Fit in curriculum
- Free space
- Level OK
- Up-to-date
- Content OK
- “Rich” pedagogy
- Cultural translation
- Would you use it?
- Guidelines

Added paradata:
- Place in curriculum
- Target group
- Which course
- Clinical subject
- Critical review
### The content curation process

<table>
<thead>
<tr>
<th>Process</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repositories, listings, collections, other sources</td>
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## Quality of metadata
- CC-licence 45%
- CC with ND 12%

## Missing or bad metadata, typos

Radboud UMC
The content curation process

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2016 | September

Evolution of the Molecular Biology of Brain Tumors and the Therapeutic Implications

A dramatic increase in knowledge regarding the molecular biology of brain tumors has been established over the past few years. In particular, recent advances regarding the role of neural cells and microglial cells along with the better understanding of the importance of angiogenesis, immunotherapy, and evaluation for the resistance of these tumors to chemotherapeutic agents and radiation therapy has been developed.

It is hoped that this new information will lead to effective treatment strategies for these tumors which remain challenging. In this book a review of the latest information on these topics along with a variety of new therapeutic treatment strategies with an emphasis on molecular targeted therapies is provided.

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*Ook in de harte niet?*

*Elk een review die naam dan een regel is.*

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Status

<table>
<thead>
<tr>
<th>Review title</th>
<th>Rating</th>
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Submit
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**1st curation round: 4 students, 700 hours**

Selection: inclusion/exclusion criteria – metadata /paradata

<table>
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<tr>
<th>Database, reports, website prototype</th>
<th>Added paradata:</th>
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<tbody>
<tr>
<td>Data cleaning</td>
<td>- Place in curriculum</td>
</tr>
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<td>- Target group</td>
</tr>
<tr>
<td></td>
<td>- Which course</td>
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**2nd curation round: teachers/doctors**

20..130 resources per specialism

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The content curation process

Repositories, listings, collections, other sources
  OER, OCW, MOOC, OTB, other

1st curation round: 4 students, 700 hours
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Database, reports, website prototype
  Data cleaning

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Library services
  Educational services
The content curation process

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Video channels
Sharing OEPs
Teacher training
Digital literacy skills for students
Better website
8 UMC’s
medicaleducation.nl
+ 1500 e-learnings
Sharing workload
National association
### The content curation process

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Refinement
# Services

## Library

1. Consultancy copyrights and CC
2. Copyright clearance
3. Search & find assistance
4. Content curation process, updates
5. Hanteren kwaliteitscriteria
6. Metadata: adding, cleaning
7. Subscription service
8. Publication, redistribute OERs

## Educational expertise center

1. Consultancy from OER to OEP
2. Consultancy reuse, revise
3. Instructional design / Open pedagogy
4. Curriculum integration
5. Policy
6. Digital literacy skills for students
7. From OER to OEP for teachers
8. Authoring tools, VLE, LMS

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Radboudumc
Spreadsheet - variables

<table>
<thead>
<tr>
<th>rating date</th>
<th>description</th>
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<td>level</td>
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<td>authors/affiliation</td>
<td>user</td>
<td>certificate</td>
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<td>institute</td>
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<td>cost</td>
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<td>open resource type</td>
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<td>mobile compatibility</td>
<td>completion time (weeks)</td>
<td>Credits</td>
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Geraadpleegd via

**a schematic representation of the hierarchy of elements in the LOM data model**
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**Diagram:**

A schematic representation of the hierarchy of elements in the LOM data model.
## Approved after 1\textsuperscript{st} round

<table>
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<th>% OK in 1\textsuperscript{st} round</th>
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<tr>
<td>totaal</td>
<td>18,8</td>
</tr>
<tr>
<td>Merlot</td>
<td>5,4</td>
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<tr>
<td>Jorum</td>
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<td>MedEdPortal</td>
<td>44,8</td>
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<td>48,2</td>
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<td>u. Essen</td>
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<td>u. Heidelberg</td>
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<td>Khan academy</td>
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<td>MIT OCW</td>
<td>8,3</td>
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<td>Open textbooks</td>
<td>13,2</td>
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<table>
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<tbody>
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<td>MOOC</td>
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<tr>
<td>OCW</td>
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<td>OER</td>
<td>18,2</td>
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</table>
## Distribution per mediatype

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<thead>
<tr>
<th>mediatype</th>
<th>% of total</th>
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</thead>
<tbody>
<tr>
<td>e-learning / CBT</td>
<td>7.3</td>
</tr>
<tr>
<td>video</td>
<td>34.3</td>
</tr>
<tr>
<td>audio</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Web-based</strong></td>
<td><strong>82.0</strong></td>
</tr>
<tr>
<td>animation</td>
<td>12.1</td>
</tr>
<tr>
<td>text</td>
<td>16.4</td>
</tr>
<tr>
<td>photo</td>
<td>15.8</td>
</tr>
<tr>
<td>graphs</td>
<td>9.9</td>
</tr>
<tr>
<td><strong>mix</strong></td>
<td><strong>62.8</strong></td>
</tr>
</tbody>
</table>

![Pie chart showing the distribution of mediatypes]
## Target population and level

<table>
<thead>
<tr>
<th>Target group</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>medical</td>
<td>98.8</td>
</tr>
<tr>
<td>biomedical</td>
<td>47.8</td>
</tr>
<tr>
<td>nursing</td>
<td>28.1</td>
</tr>
<tr>
<td>therapists</td>
<td>12.0</td>
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<table>
<thead>
<tr>
<th>level</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>bachelor</td>
<td>82.8</td>
</tr>
<tr>
<td>master</td>
<td>45.4</td>
</tr>
<tr>
<td>specialisation</td>
<td>7.0</td>
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[Pie charts showing target population and level distribution]

[Geneeskunde, Biomedisch, Verpleegkunde, Paramedisch] [Bachelor, Master, Specialisatie]
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- Part of curriculum reform
- Self directed learning

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Lessons learned

1. Curriculum reform offered momentum, motivating teachers
2. Teachers tired
3. New source of motivation needed now
4. Policy development
5. Student push
6. Setting up supportive services
7. Educating colleagues (library, education support, policy, consultants, management)
8. Advocates needed
9. Special role of innovators
10. Early adopters need other approach, more support
11. Share successes
12. Evaluation results
13. Train the trainer
14. Working together in the Netherlands → Cocura, community
15. Updating & upgrading content curation database