Cross-cultural development of OER: from ideas and needs to collaboration

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Ruhr West University of Applied Sciences
History

- Founded in 2009
- Public institution, regional development
- 6000 students, 80 professors and growing 😊
- Western Ruhr area (Bottrop, Mülheim)

Focus Areas

- Civil Engineering
- Business Administration –
  International Trade Management & Logistics
- Mechatronics
- Human-Machine-Interaction
- Business Information Systems
- Master Programme Business Administration
Glo-Link
Global Learning, Innovation and Knowledge Management
Research on Processes and Systems in the Global Context

Focus Areas
Global Learning, Innovation & Knowledge Management
- Global Information Systems
- Innovation Management
- Process Management
- Knowledge Management
- E-Learning
- Competence Management

Research Projects

Our team
Franziska Voß  Thomas de Fries  Irawan Nurhas  Julia Stoffregen
European Projects on OER

- **ÖWR** – OER in öffentlichen Verwaltungen
- **Play4Guidance**: Business Games for Entrepreneurs
- **EAGLE**: E-Learning in Public Administration
- **Open Educational Ideas and Innovations** (OEI2)
- **OpenDiscoverySpace**: OER for Schools
- **OpenScout**: OER for Management
OER – Internationalization

Why using OER globally?

- Availability of Resources
- International Cooperation (e.g. team teaching)
- Less efforts for high quality materials

Source: https://pixabay.com/en/continents-flags-silhouettes-mosna-1055960/ (CC0)
OER in Europe / Germany

International Portals

- **Open Education Europa**: EU Portal
- **Learning Resource Exchange** (LRE): school platform
- **OER Commons**: ca. 50000 OER in different areas – most of them in English
- **Scientix**: STEM resources
- More initiatives: **Wikieducator**

German Portals

- **Deutsche Bildungsserver**: Online resources in German
- Federal OER search engine **ELIXIER**
- Regional portals, e.g. NRW **learn:line NRW**
- Private initiatives, e.g. for teachers **Lehrer Online**.
- **OER Informationsstelle** OER Coordination
- „Content Buffet“: National platform **Jointly**
- OER **World Map**: Projects and initiatives
## Barriers for global Open Education

<table>
<thead>
<tr>
<th>Category</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>OER and global collaboration</td>
<td>Lack of awareness</td>
</tr>
<tr>
<td></td>
<td>• No motivation in creating OER</td>
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<td>• Slow response of potential partners</td>
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<td>• Lack of awareness on progress and commitment</td>
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<tr>
<td>Software architecture</td>
<td>Requirements not identified / interpreted correctly</td>
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<td></td>
<td>• Different perception about the system</td>
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<tr>
<td>Global collaboration</td>
<td>Lack of coordination</td>
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<td>• Different understandings of roles and responsibilities in the</td>
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<td>collaboration</td>
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<td>Lack of communication</td>
<td>• Language differences between authors</td>
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<td>• Most OER in English</td>
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<tr>
<td></td>
<td>• No available communication medium between authors</td>
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<td>Lack of internet connection</td>
<td>• Limitations of the supporting infrastructure of the</td>
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<td>telecommunications network</td>
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<tr>
<td>Globalization and internationalization</td>
<td>Lack of understanding</td>
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<td>• Cultural differences that make a difference in the</td>
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<td>interpretation of symbols, colors, and non-verbal language</td>
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<td></td>
<td>• Different habits in local areas</td>
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</tbody>
</table>
• OER re-use is not yet common practice, in particular not in cross-border contexts
• Not-invented-here syndrome: If I have not created / spent efforts / reviewed it myself, it can’t be good
• Massive Open Online Colonialism…
• Lack of appreciation and recognition in the community
• Sharing complete resources might not be the solution…

*What are solutions for cross-border collaboration and mutual (!) synergies?*
• Key issues
  – How to internationalize materials?
  – What is the effort?
  – Which materials are promising and useful?
  – Which activities might lead to long-term collaboration?
Check the internationalization requirements:
• Are there national / regional concepts in the content?
• Does the curriculum fit?
• Is the resource appealing?
• What are the differences between originating and target culture?
• How can culture models be applied to the resource? (e.g. Henderson, 2014)

Content analysis
• Specific concepts and practices and their cultural specific meanings (laws, business logic, behavior, norms, music, traditions, …)
• Language, language conventions, politeness, …
• Knowledge in context (what is common knowledge, what is made explicit?)
• Curriculum fit
• Learning outcomes and didactics
• Group work
• Teacher roles
• Localization
  – Dates, formats, numbers, units
• User interface
  – pictures, navigation, shapes, numbers, colors, …
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
<th>2️⃣</th>
<th>1️⃣</th>
<th>0️⃣</th>
<th>1️⃣️</th>
<th>2️⃣️</th>
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<td>Language</td>
<td>English</td>
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<td>X</td>
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<td>Parts need to be translated</td>
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<td>Topic</td>
<td>Pythagoras theorem</td>
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<td>Fit exactly</td>
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<td>Method</td>
<td>Interactive simulation, assisted by teacher</td>
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<td>Needs to be explained in detail for distance learning pupils</td>
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<tr>
<td>Quality</td>
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<td>• Motivational</td>
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<td>• Learner control</td>
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<td></td>
<td>• Communication</td>
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<td>• Interface design (characters, metaphors, numbers, colors)</td>
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<td>Summary</td>
<td>Summary of fitness</td>
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</tbody>
</table>
## Possible Adaptation Needs

<table>
<thead>
<tr>
<th>Content</th>
<th>Adaptation need</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample how to apply Pythagoras theorem to measure distances</td>
<td>Use map from home town</td>
<td>Exchange map, Use screen capture tool</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning activity</th>
<th>Adaptation need</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spontaneous group work to measure distances</td>
<td>Use same age / gender group Each group gets one mentor</td>
<td>Build groups beforehand, provide strong guidance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language aspect</th>
<th>Adaptation need</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as main language</td>
<td>Translate to Finnish</td>
<td>Use subtitle tool for video lectures Translate cases (external agency)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UI Aspect</th>
<th>Adaptation need</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background colors not appealing Navigation not intuitive</td>
<td>Change background colors and logo Change navigation structure from left to top navigation</td>
<td>For ppt: change master slide For simulations: use simulation generator Restructure navigation in coffeecup tool</td>
</tr>
</tbody>
</table>
Further Models: OER Adaptation

- OER Adaptation Handbook, Open Scout Project
- Commonwealth of Learning http://hdl.handle.net/11599/233
Share your results

Develop a strategy for systematic sharing

• Re-Publish: Submit to repositories
• Notification: Notify colleagues if you have used their OER
• Resubmission: Update repositories
• Further collaboration and development / Feedback
  Experience sharing: Discuss your results, improve your and
  your colleagues' work
• Next development goals: When should there be a next
  version, who will be involved
Alternative 2: Early Sharing: Open Educational Ideas

• Open Educational Ideas
  – Recent or future needs and requirements leading to collaborative development of OER across cultures and languages

• Theoretical background
  – Wabi-Sabi principle (Treviranus, 2011): Designing the imperfect to allow creation processes
  – From Open Content to Open Thinking (deLiddo, 2010)
  – Imperfect Design
  – Frugal innovation

• Main idea
  – Collaborating internationally
  – One idea, two realizations
Idea Exchange and Collaboration

- Imperfect Design
- Idea Sharing
- Develop idea
- Find collaborators
- Request Requirements and Feedback
- Design OER
- Collaborative Development / Virtual Mobility
- Collaboratively develop OER
- Share idea
- Tool Library
- Social Network
- Create Improvement Ideas
- Create and share OEP
- Test OER
- Run courses
- Collaborative Teaching
- Improvement Reputation Management

Prof. Dr. Jan M. Pawlowski
## OEI Artifacts

<table>
<thead>
<tr>
<th>Type</th>
<th>Typical Shared Artifacts</th>
<th>OEI Artifacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEI</td>
<td>Oral conversations</td>
<td>Ideas, innovations, needs / requirements (to develop educational material)</td>
</tr>
<tr>
<td>OER</td>
<td>Learning Objects, Slide sets, simulations, animations</td>
<td>Early stage digital objects, draft versions, course outlines</td>
</tr>
<tr>
<td>OEP</td>
<td>Learning designs, curricula, lesson plans, experiences</td>
<td>Didactic / lesson plans, new curricula, experience requests</td>
</tr>
<tr>
<td>Open Access</td>
<td>Articles, textbooks</td>
<td>Position papers, book outlines, drafts</td>
</tr>
<tr>
<td>Open Source</td>
<td>Authoring tools, LMS</td>
<td>Prototypes</td>
</tr>
<tr>
<td>Assets</td>
<td>Pictures, illustrations, texts</td>
<td>Sketches, drafts</td>
</tr>
</tbody>
</table>
Finding partners: Idea Space
Expressing Ideas

Computer Course, first grade started by jan.pawlowski

Description

What is the course all about. What is the broad topic, what are the main aspects to be covered?

The goal is to create an innovative course on computer basics for kids in the first grade...please share experiences, good practices, examples - the course will be held in German, so all materials need to be open to be translated.

The course will be held in a face to face setting, but some exercises and tasks can be self-learning / electronic only...

Target Group

Briefly describe the characteristics, requirements and preferences of the target group

Initial Ideas Description

Target Group

Ressource Collection

Outline

Learning Outcomes

Course Plan

(Course) Development

Course Development

Evaluation

Experiences and Feedback
Collaborative Editing

• Planning together, editing locally
  – Authoring tools
  – Google docs
  – …

• Translation and adaptation software
  – E.g. power point translator
  – Under development: https://www.x5gon.org

• Continuous feedback
  – Direct communication between collaborators
  – „How would you do ….?“
Summary

• Internationalizing OER can be…
  - ....an (or the only) economic alternative
  - ....is a tool to develop collaborations

• Adaptation will become easier with upcoming technologies
• Person to person collaboration is still the key to success
  - Mutual learning
  - Continuous feedback
  - Continuous improvement & quality

• UNESCO as a community for sharing and collaborating?
Any Questions?

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http://en.hochschule-ruhr-west.de/research/computer-science/institute-members/professor-jan-pawlowski.html