



**HOCHSCHULE RUHR WEST**  
UNIVERSITY OF APPLIED SCIENCES

**INSTITUT INFORMATIK**

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

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EDEN Conference

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# Hochschule Ruhr West

## 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



Prof. Dr. Jan M. Pawlowski

## Research Projects



## Our team



Franziska Voß



Thomas de Fries



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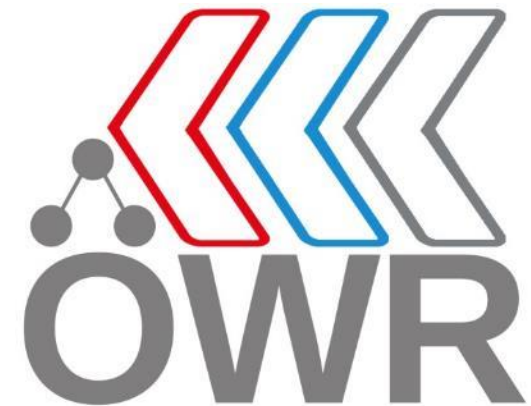
Julia Stoffregen



## 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



## 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



OER and global collaboration	Lack of awareness	<ul style="list-style-type: none"><li>• No motivation in creating OER</li><li>• Slow response of potential partners</li><li>• Lack of awareness on progress and commitment</li></ul>
	Software architecture	<ul style="list-style-type: none"><li>• Requirements not identified / interpreted correctly</li><li>• Different perception about the system</li></ul>
Global collaboration	Lack of coordination	<ul style="list-style-type: none"><li>• Different understandings of roles and responsibilities in the collaboration</li></ul>
	Lack of communication	<ul style="list-style-type: none"><li>• Language differences between authors</li><li>• Most OER in English</li><li>• No available communication medium between authors</li></ul>
	Lack of internet connection	<ul style="list-style-type: none"><li>• Limitations of the supporting infrastructure of the telecommunications network</li></ul>
Globalization and internationalization	Lack of understanding	<ul style="list-style-type: none"><li>• Cultural differences that make a difference in the interpretation of symbols, colors, and non-verbal language</li><li>• Different habits in local areas</li></ul>

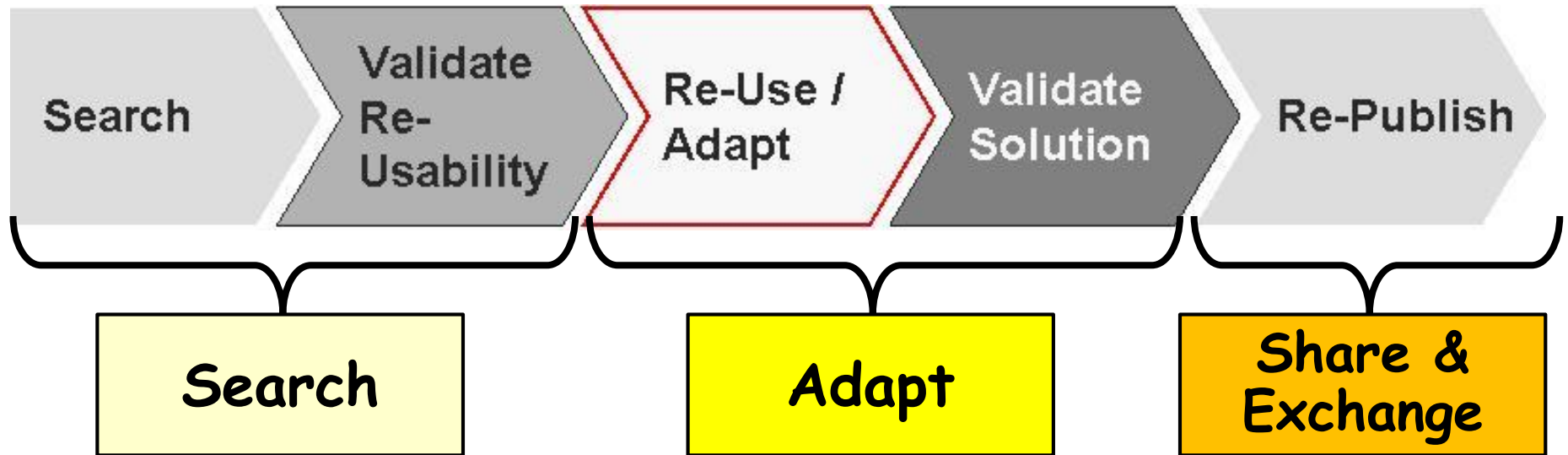


## Issues



- 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?



# Search and Validate



## 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, ...

Attribute	Description	☹☹	☹	0	☺	☺☺	Comment
Language	English				X		Parts need to be translated
Topic	Pythagoras theorem						
Age group	12-16					X	Fit exactly
Method	Interactive simulation, assisted by teacher					X	Needs to be explained in detail for distance learning pupils
Quality	<ul style="list-style-type: none"> <li>• Description</li> <li>• Standards</li> <li>• Curriculum fit</li> <li>• Quality of contents</li> <li>• Interactivity</li> <li>• Media use</li> <li>• Appropriateness of methods</li> <li>• Technical requirements</li> <li>• Technical correctness</li> <li>• Motivational</li> </ul>						
Culture	<ul style="list-style-type: none"> <li>• Content</li> <li>• Method</li> <li>• Goal orientation</li> <li>• Experiment value</li> <li>• Teacher role</li> <li>• Flexibility</li> <li>• Value of errors</li> <li>• Motivation</li> <li>• Learner control</li> <li>• User activity</li> <li>• Cooperative learning / group work</li> <li>• Communication</li> <li>• Interface design (characters, metaphors, numbers, colors)</li> </ul>						
Summary	Summary of fitness						

<b>Content</b>	<b>Adaptation need</b>	<b>Tool</b>
Sample how to apply Pythagoras theorem to measure distances	Use map from home town	Exchange map Use screen capture tool
<b>Learning activity</b>	<b>Adaptation need</b>	<b>Actions</b>
Spontaneous group work to measure distances	Use same age / gender group Each group gets one mentor	Build groups beforehand, provide strong guidance
<b>Language aspect</b>	<b>Adaptation need</b>	<b>Actions</b>
English as main language	Translate to Finnish	Use subtitle tool for video lectures Translate cases (external agency)
<b>UI Aspect</b>	<b>Adaptation need</b>	<b>Actions</b>
Background colors not appealing Navigation not intuitive	Change background colors and logo Change navigation structure from left to top navigation	For ppt: change master slide For simulations: use simulation generator Restructure navigation in coffeecup tool



## Further Models: OER Adaptation



- OER Adaption 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





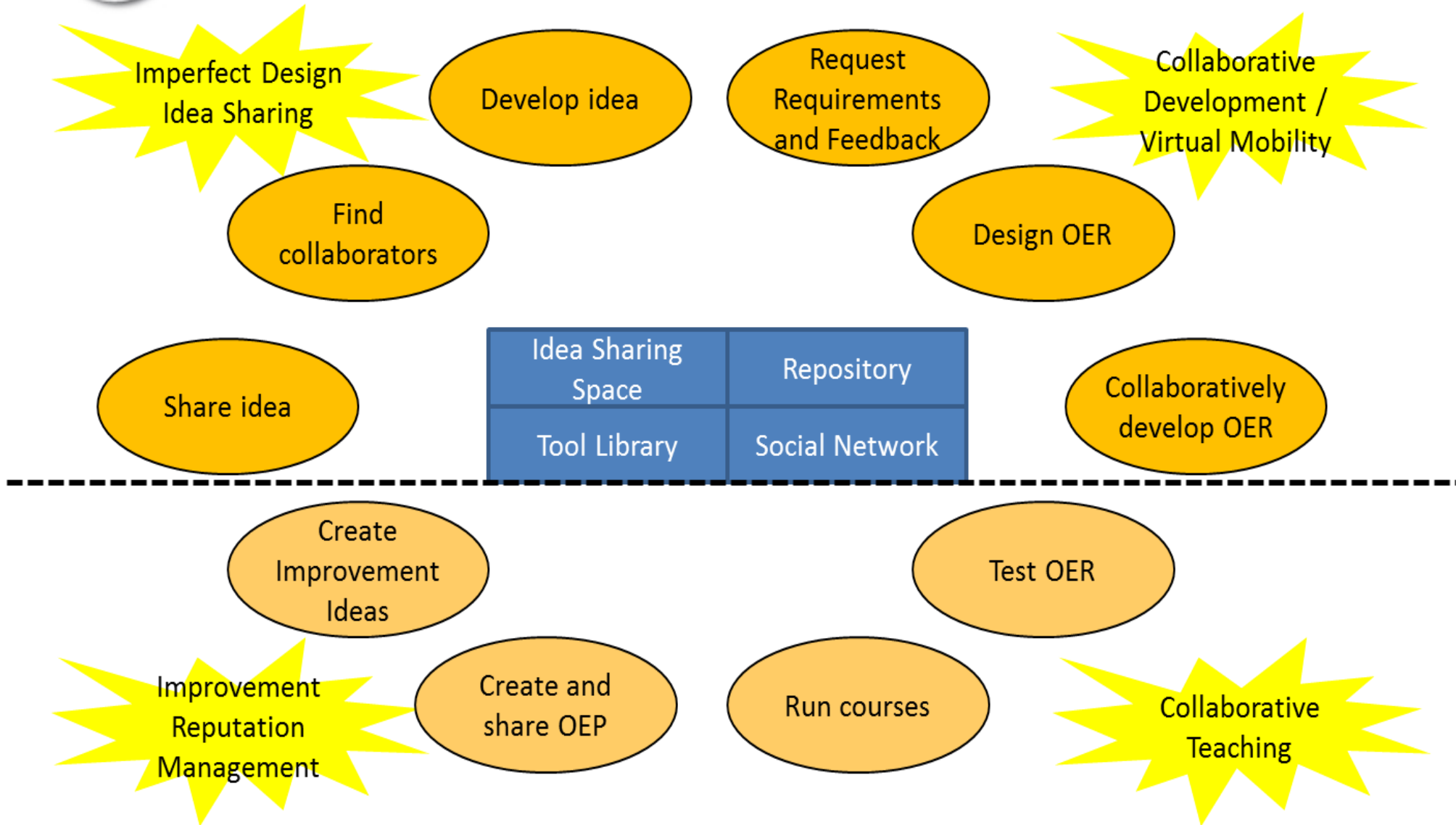
## Alternative 2: Early Sharing: Open Educational Ideas



- 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

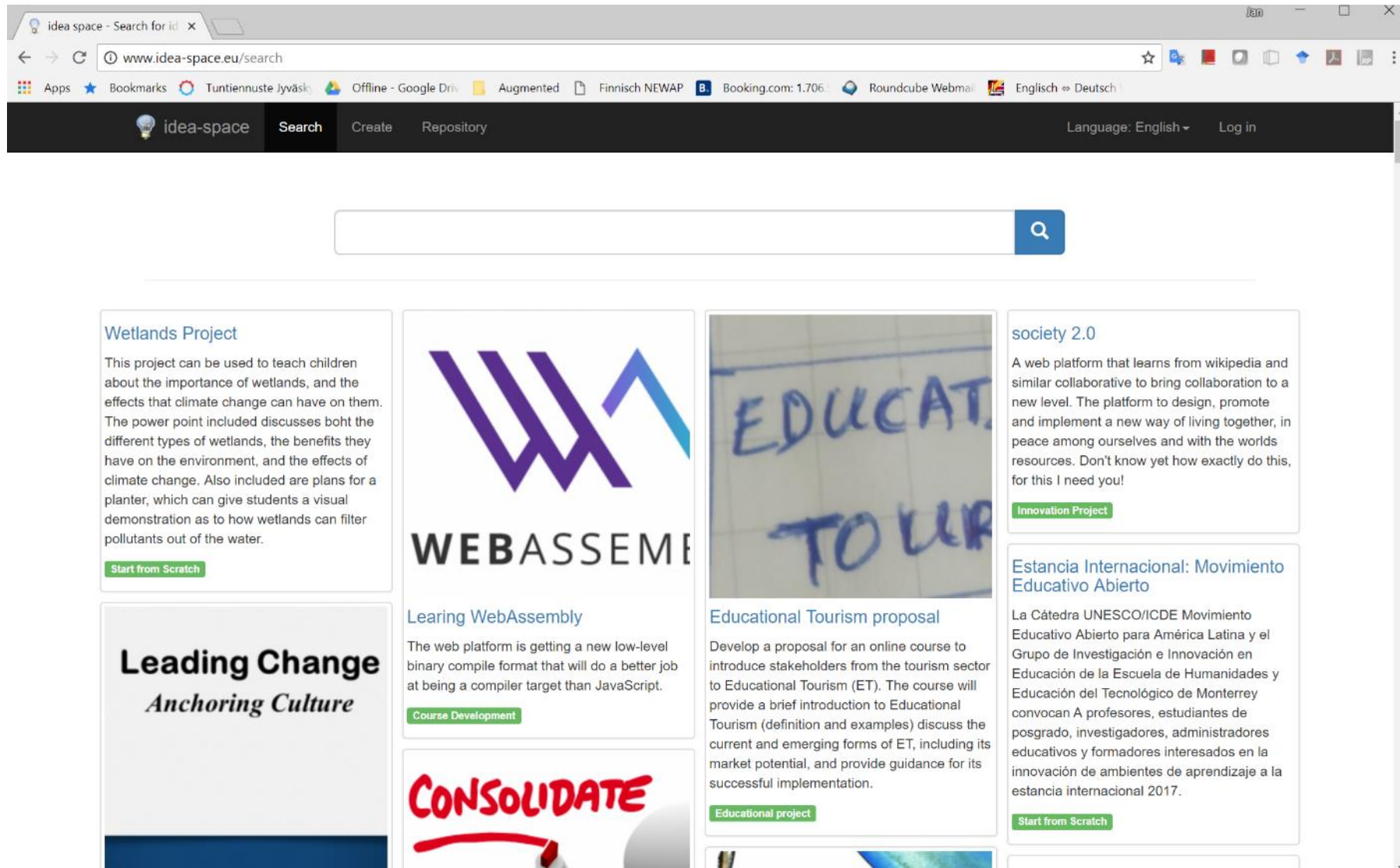


# Idea Exchange and Collaboration



# OEI Artifacts

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



The screenshot shows a web browser window displaying the search results on the Idea Space website. The browser's address bar shows the URL [www.idea-space.eu/search](http://www.idea-space.eu/search). The website's navigation bar includes 'idea-space', 'Search', 'Create', and 'Repository'. A search bar is located at the top of the page content. Below the search bar, several project cards are displayed:

- Wetlands Project**: A project to teach children about wetlands and climate change. Includes a power point and a planter. [Start from Scratch](#)
- Leading Change Anchoring Culture**: A project with a dark blue header.
- Learning WebAssembly**: A web platform getting a new low-level binary compile format. [Course Development](#)
- CONSOLIDATE**: A project with a red header and a red underline.
- Educational Tourism proposal**: Develop a proposal for an online course to introduce stakeholders from the tourism sector to Educational Tourism (ET). [Educational project](#)
- society 2.0**: A web platform that learns from wikipedia and similar collaborative to bring collaboration to a new level. [Innovation Project](#)
- Estancia Internacional: Movimiento Educativo Abierto**: La Cátedra UNESCO/ICDE Movimiento Educativo Abierto para América Latina y el Grupo de Investigación e Innovación en Educación de la Escuela de Humanidades y Educación del Tecnológico de Monterrey convocan A profesores, estudiantes de posgrado, investigadores, administradores educativos y formadores interesados en la innovación de ambientes de aprendizaje a la estancia internacional 2017. [Start from Scratch](#)



# Expressing Ideas



idea space - workspace x

www.idea-space.eu/idea/92/workspace

Apps Bookmarks Tuntiennuste Jyväskylä Offline - Google Drive Augmented Finnisch NEWAP Booking.com: 1.706 Roundcube Webmail Englisch ⇌ Deutsch

idea-space Search Create Repository Language: English Log in

## Computer Course, first grade started by jan.pawlowski

Join

### Initial Ideas

- Description
- Target Group
- Ressource Collection

### Outline

- Learning Outcomes
- Course Plan

### (Course) Development

- Course Development

### Evaluation

- Experiences and Feedback

### Description

Posted by jan.pawlowski 3 years ago in category: **Initial Ideas**

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

Posted by jan.pawlowski 3 years ago in category: **Initial Ideas**

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



# 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?



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# Any Questions?

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