

# Designing Infrastructures Allowing Higher Education Teachers to Reuse, Adapt and Exchange Open Educational Resources



OE GLOBAL Presentation | September 28th 2021



Nadine Schroeder, Sophia Krah & Johannes Wendt  
Learning Lab | University of Duisburg-Essen



UNIVERSITÄT  
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*Open-Minded*



# Overview

- Background
  - Research project
  - Version management & OER
- Study
  - Interviews
  - Results
- Prototypical concept
  - Development & evaluation
  - Main results
  - Examples of functions
- Conclusion

# Background

# Research project

- Project “Educational Architecture“
  - Finding OER in higher education context in Germany
  - Technical, didactical and organizational requirements for designing a distributed infrastructure for OER
- Research study
  - Focus
    - Expectations and needs of higher education teachers for OER infrastructures
    - Version management of OER
    - Collaboration
  - Aim
    - Options and solutions for developers designing OER platforms

# Version Management & OER

Versions  
Version History  
Collaboration  
Remix  
Revise  
Merge  
Software Development  
Commit  
Material type  
File format  
Updates  
Release  
Modifications  
Derivatives  
Fork  
Reuse  
Changes

# Study

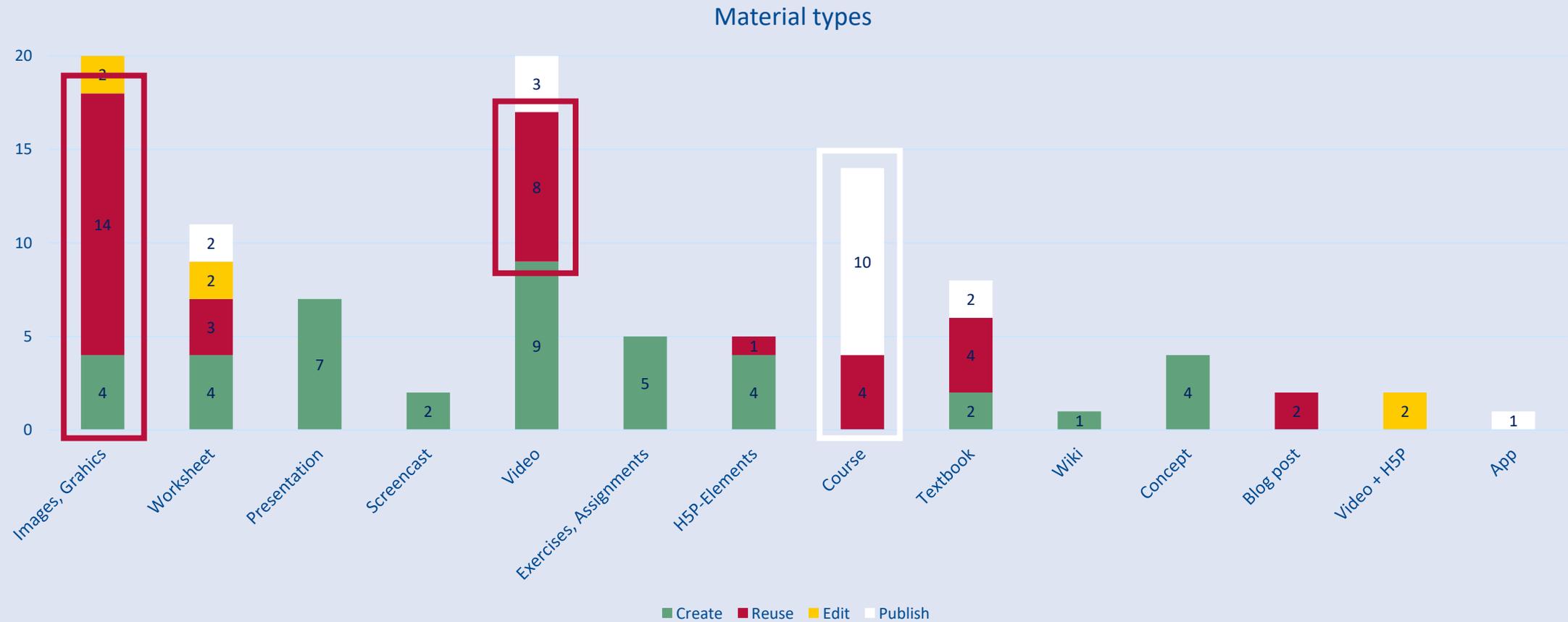
# Interview Study | Research Questions

- OER activities
  - How do teachers create, use, and process OER?
  - In which framework conditions does the work with OER take place?
- Requirements & needs
  - What difficulties do teachers encounter when working with OER?
  - What expectations do teachers have about working with OER?
- Version management
  - How can teachers benefit from version management functionalities?

# Interview Study | Sample & Method

- 8 female & 15 male (N=23) higher education teachers from Germany and Austria
- Prerequisites
  - Teaching at a German-speaking university
  - Production of open materials for teaching
  - At least one further OER activity (reuse, edit, share OER)
- Conducted July-September 2020

# Results | Material Types



# Results | New Versions

- Providing new versions
  - Updates
  - Content for different scenarios
- Older versions
  - Development of resource
  - Possibility for deleting or archiving
- Relevant functions
  - Version history
  - Track changes

# Results | Feedback & Collaboration

- Feedback
  - Interest in external use
  - Improving and developing content
- Community
  - Exchanging ideas and materials
  - Updating together
- Collaborative editing
  - Clear distribution of roles
  - Closed space during developing phase

# Prototypical concept

# Prototypical concept

- Concept for managing versions and derivatives of OER with collaborative elements
- Focus on
  - Requirements of users
  - Relevant functions
  - Intuitive usability
  - Applicability in practice
- Focus *NOT* on
  - Design
  - Technical implementation

# Development & Evaluation

Version prototype	Basis	Details & format	Development period	Target group	Setting & method	Participants	Duration	Date
Version 0	Interviews	User Stories + Wireframes	10-12/2020					
Version 1	Interviews	Slides for testing	01-03/2021					
				E-Learning staff	Focus group workshop	12 (10f, 2m)	60 Min.	03/2021
Version 2	Focus group workshop	Revised slides	04/2021					
				Teachers	Individual sessions	6 (3f, 3m)	45-90 Min.	04/2021
Version 3	Individual Sessions	Revision + Video	05/2021					
				Interview participants	Video + Survey	12 (/23)	15 Min.	06-07/2021
Version 4	Survey	Final video	09-10/2021					

# Main results

- Additional and adapted functions
  - Uploading and filtering different material types
  - Change comments: Preselection vs. free text
  - Community space as work-in-progress area
- Terms
  - Derivatives = Add own version
  - Overview of derivatives = Further Versions
- Usability
  - Process of adding new version
  - Finding other versions

# Concept | Examples of functions

- Versions
  - Version history
  - Add new version
  - Archive version
- Derivatives
  - Add own version
  - Merging further versions
- Community space
- Working space

**Titel**   
Remixing OER

**Authors**   
Toni Testing

**Last change**   
29.03.2021

**Original**   
Original ✓

**Material types**   
Presentation

**License**   
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- Description
- Version History**
- Further Versions
- Sources
- Discussion

New Version Archive Version Open Download

Select	Versions	Persons	Date	Files	Modifications
<input type="checkbox"/>	Version 2 <a href="https://doi.org/10.abcdef_2">https://doi.org/10.abcdef_2</a>	Toni Testing	29.03.2021	20210329_2.pptx	Errors corrected 
<input type="checkbox"/>	Version 1	Toni Testing	18.03.2021	20210318.pptx	First draft

Resource DOI: <https://doi.org/10.abcdef> 

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Toni Testing

**Title**

Creating OER

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Description

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Select	Versions	Date	Persons	Files (all) ▼	Modifications
<input type="checkbox"/>	Version 3 <a href="https://doi.org/10.abcdef_3">https://doi.org/10.abcdef_3</a>	30.01.2021	Olli Openness	CreatingOER_3.pptx CreatingOER_3.md	Content update
<input type="checkbox"/>	Version 2	10.09.2020	Olli Openness	CreatingOER_2.pptx CreatingOER_2.md	Formal corrections
<input type="checkbox"/>	Version 1 <a href="https://doi.org/10.abcdef_1">https://doi.org/10.abcdef_1</a>	05.08.2020	Olli Openness	CreatingOER_1.md	

**Titel**   
 Creating and revising OER

**Authors**   
 Toni Testing

**Last change**   
 18.04.2021

**Original**   
[Creating OER / Olli Openness](#)

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New Version

Archive Version

Select	Versions	Person	Date	Files	Modifications
<input type="checkbox"/>	Version 1 <a href="https://doi.org/10.abcdef_1">https://doi.org/10.abcdef_1</a>	Toni Testing	18.04.2021	20210318.pptx	Added own version

Resource DOI: <https://doi.org/10.abcdef> 

 Original Resource: [Creating OER/ Olli Openness \(Version 3\)](#)

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Description

Version History

Further Versions

Sources

Discussion

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Person	Title	Date	Comment	Basis resource
<a href="#">Testing, Toni</a>	<a href="#">Creating and revising OER</a>	18.04.2021	Additions to content	<a href="#">Creating OER / Olli Openness (Version 3)</a>
<a href="#">New, Nina</a>	<a href="#">Create OER for biologists</a>	12.12.2020	Extension for target group	<a href="#">Creating OER / Olli Openness (Version 2)</a>



Status

● ● ● ● Work-in-progress



# Community-Project



Titel

Mainstreaming OER



Persons

Toni Testing



Last change

12.04.2021



Description

Discussion

Files

Sources

Contributer

Activites



For my presentation to OER multipliers, I am looking for concepts that describe best practices for disseminating OER



Concept.odp



Olli Openness

08.04.21 – 14:52

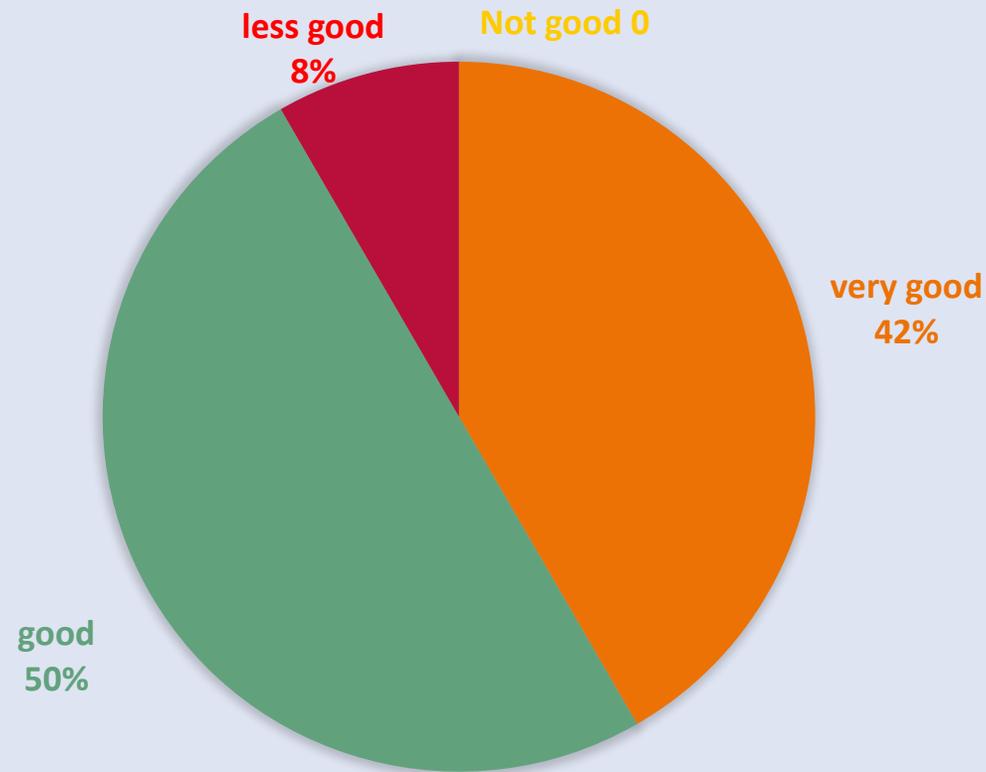
Our approach might fit well

**B** *I* ~~S~~ **H** `</>` ” ☰ ☰ ☑ 🔗 🖼️ 📄 — 💬 ... 🗑️

Thanks for your concept. I was able to take some hints

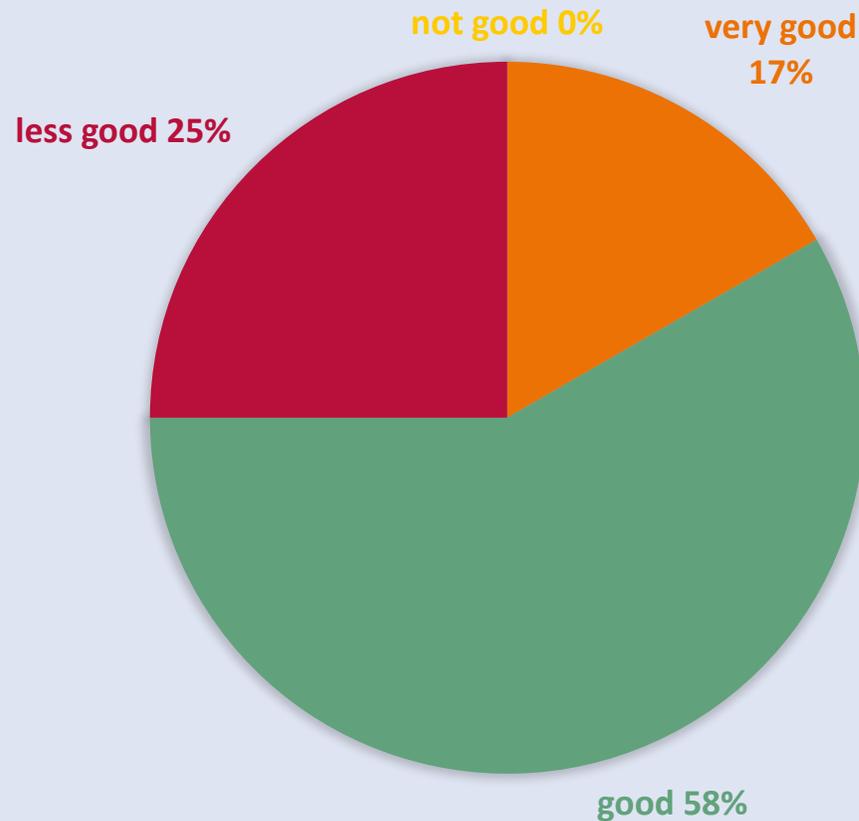
# Results | Evaluation

How do you rate the intuitive use of the functions?



# Results | Evaluation

How do you rate the practical applicability for your everyday work?



# Conclusion

- Limitations
  - Missing requirements due to limited number of interview participants
  - Evaluation not under *real* conditions
  
- Outlook
  - Video presenting all functions
  - Technical concept to be implemented in an OER repository

# Discussion

- Which OER platforms do teachers use at your institution?
  - Do those platforms integrate version management functions?
  - Do those platforms provide collaborative elements?
- Do you think our approach would be beneficial?
- Which additional functions do you think would be useful?

# We appreciate your attention!



Nadine Schroeder

[nadine.schroeder2@uni-due.de](mailto:nadine.schroeder2@uni-due.de)

Sophia Krah

[sophia.krah@uni-due.de](mailto:sophia.krah@uni-due.de)