

# Open Science at VU Amsterdam



VU University Library  
Dr. Sander Bosch and Iris van der Werff

contact us: [vraag.ub@vu.nl](mailto:vraag.ub@vu.nl)

## Open Science =

## Research

## Impact

## Education

### What?

Open Science aims to



- make scientific knowledge openly available, accessible and reusable
- increase scientific collaborations and sharing of information
- open the processes of scientific knowledge creation, evaluation and communication

### Why?

Quality & Integrity

Collective Benefit

Diversity & Inclusiveness

Equity & Fairness

Open Access

FAIR Data & Software

RDM Training

Open Peer Review

Research Integrity

Science Communication

Citizen Science

Public Engagement

Sustainable Development Goals

Open Educational Resources

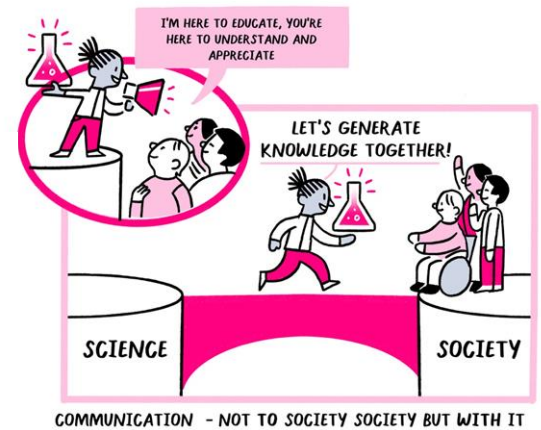
Open Pedagogy

Community Service Learning

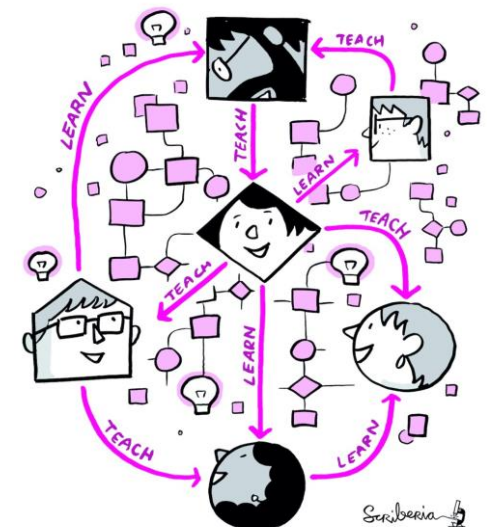
Life Long Learning



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Scriberia



Scriberia

# Using and creating open educational resources (OER)



Sjors Keijzer, VU University Library  
Sylvia Moes, VU University Library  
Cees van Gent, VU University Library

Contact us: [vraag.ub@vu.nl](mailto:vraag.ub@vu.nl)

## What are open educational materials?



Learning, teaching and research **materials** in any format and medium that reside in the **public domain** or are under copyright that have been released under an **open license**, that permit **no-cost access, (re-)use, re-purpose, adaptation and redistribution by others**.

UNESCO Recommendation on OER; 2

Such as

- Open access articles
- Knowledge clips
- Open textbooks
- Open assignments

## Where to find open educational materials?

There are many repositories.



edusources



libsearch



open textbooks



open images

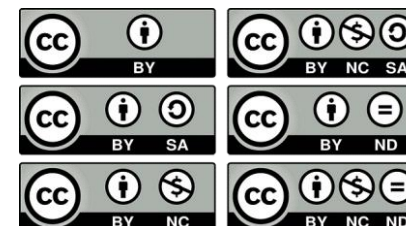
## How to use open educational materials?

Open educational materials are released under an open (free) license, such as the creative commons license.

Depending on the license, you are free to use, mix and adapt the open educational materials.

Always cite your source, also known as **giving attribution**.  
Try using an **attribution builder**.

The creative commons licences



## How to create and share open educational materials?

Ask the University Library.

At the library we can help you create, save, structure and share your open educational materials, such as knowledge clips.

Together, we will look at the best solution.

Contact us!

[Vraag.ub@vu.nl](mailto:vraag.ub@vu.nl)

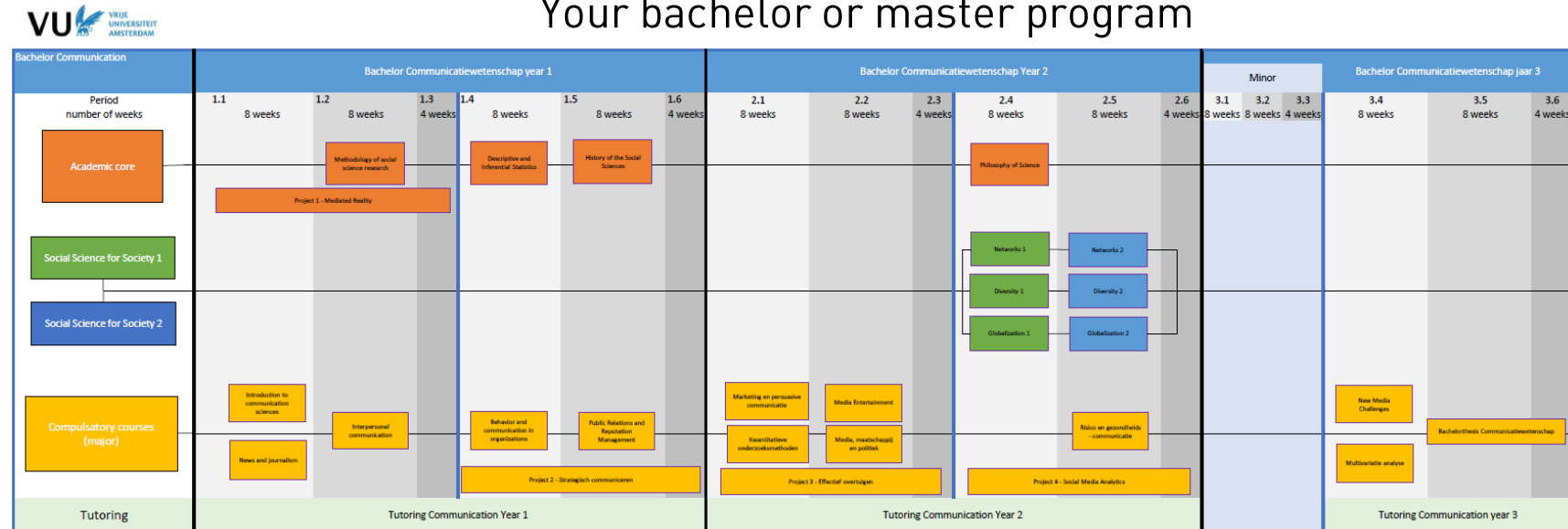
# Interactive learning paths and (open) educational resources



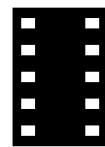
Sjors Keijzer, VU University Library

Contact us: vraag.ub@vu.nl

## Your bachelor or master program



Create your learning path and save, structure and share your:



videos



assignments



literature



own materials

# CopyRIGHT-tool: educational resources you can (re)use

Cees van Gent, head of educational support at VU library  
Sjoerd Roorda, project manager at SURF

contact us: [vraag.ub@vu.nl](mailto:vraag.ub@vu.nl)

## What was the problem?

### 2017 Easy Access agreement

Defines the way educational resources can be used for education and how to pay for them. The agreement requires universities to report on usage to publishers.

### Complex and time consuming

Reporting requires a lot of manual work and results in many discussions over the interpretation of the agreement.

## This was my solution

### Automatic analysis and reporting

We combined efforts with 3 other universities and SURF to create a set of tools that automatically generates the reports and insights.

## What were the results?

### Tools

A set of tools that analyses documents in Canvas (and other LMS) and reports on possible copyright-issues and alternatives such as licensed and open learning materials.

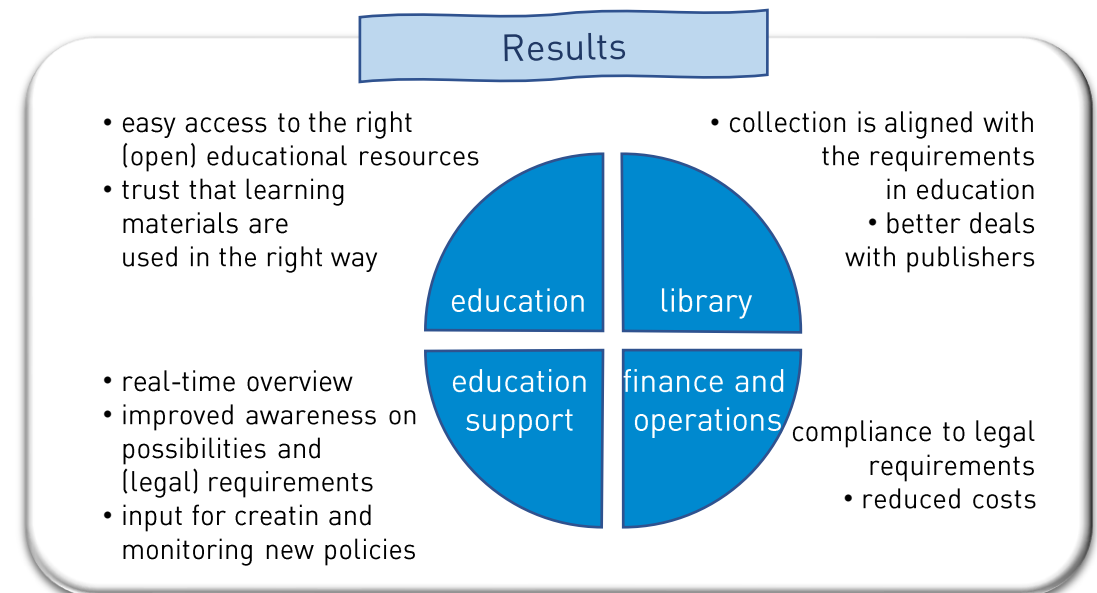
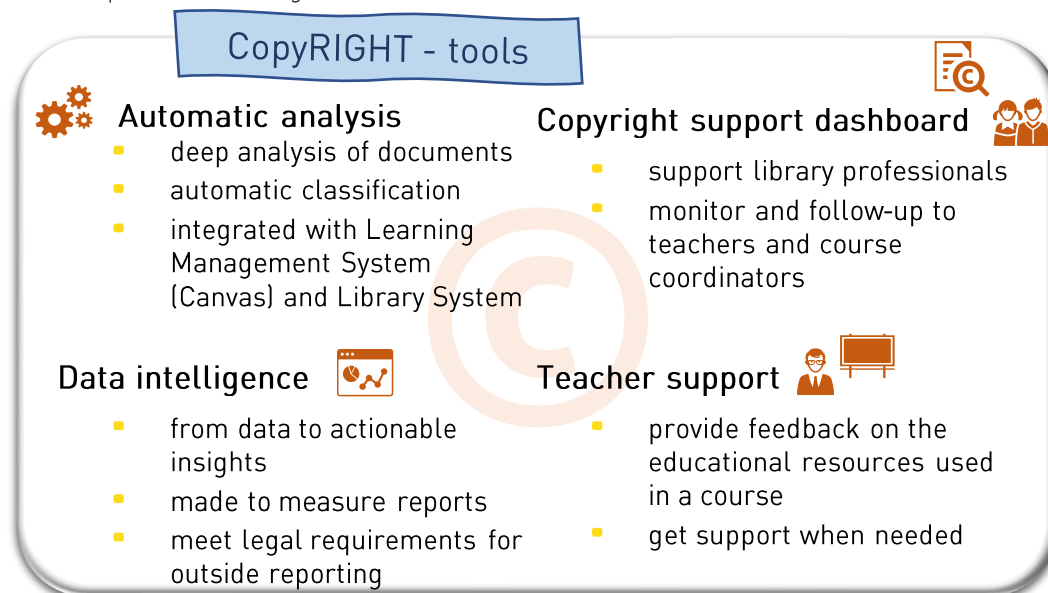
### Education and Library

Copyright compliance is a joint effort and the tools support professionals in exaction and the library.

## What are your lessons learnt?

### A legal text is not an algorithm

It is not easy to analyse all the documents we use in our LMS. And, legal texts don't always translate to software but, it also helped to improve the agreements.



# 3D printing/scanning & Virtual Reality: enrich the learning experience



Sylvia Moes, innovation manager educational support at VU library  
Contact us: vraag.ub@vu.nl

How do 3D printing and Virtual Reality support learning?

What did we create?

What is available to support you?

Video material with reactions of students and teachers (in Dutch)

Learning Goal	3D Technology				Mechanism
	VR	AR	3D Scanning	3D Printing	
Develop ethical awareness	X				Simulations designed to require empathy or communal approaches to solve
Develop analytical skills	X	X			Simulations designed to structure the achievement of learning goals
Gain practice	X	X			Shared simulations
Develop strategies for collaboration	X	X			Shared simulations
Gain self-confidence in practical tasks	X				Iteration of simulated experiences
Develop scientific literacy	X			X	Interaction with objects too large or too small to interact with in the physical world
Develop artistic literacy	X	X	X	X	Interaction with materials difficult or impossible to manipulate in the physical world, and the ability to iterate designs
Develop spatial and 3D visualization skills			X	X	Iteration of design work
Increase student ownership of their own learning	X	X	X	X	Learning new skills to use the technology, conceptualizing one's own uses for the technology
Develop teaching and mentoring skills	X	X		X	Collaboration with peers on shared experiences and/or simulations
Develop oral communication skills	X	X	X	X	Collaboration with others on shared experiences and/or simulations
Develop systems-thinking skills	X	X	X	X	Simulations designed to require mental modeling and abstraction



## Reproduction of cultural heritage materials for learning by scanning and 3D printing

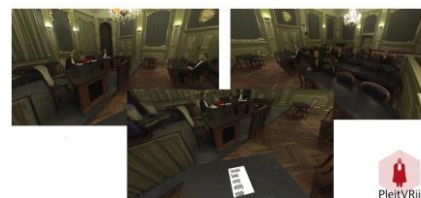
We scanned a 4000 years old clay cone so students can study the object in a better way. And we printed a house in the Kalverstraat 62 on scale as study object.



## Virtual Reality

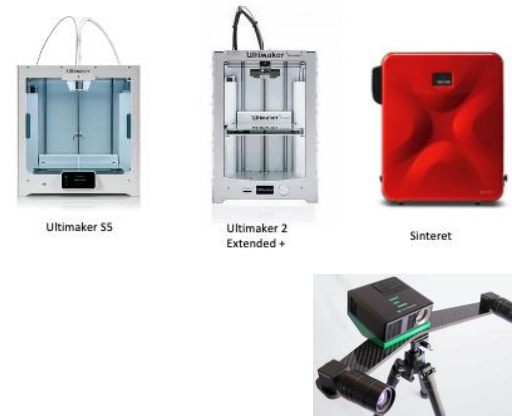
We created a virtual courtroom where students of different institutions can meet each other real time to develop their pleading skills. Other students give real feedback via an App.

View of student with VR Gear: Virtual Courtroom



## 3D printers and 3D Scanner

A set of tools that analyses documents in Canvas (and other LMS) and reports on possible copyright-issues and alternatives such as licensed and open learning materials.



## VR gear and support

In 1A-25 NU we have VR gear like Oculus Quest 2 and green screen plus technical support.



## How do students and teachers experience 3D learning?

Below you will find a video of 3D printing with a reaction of the teacher who used a 3D model. And how teachers and students react on the Virtual Classroom



Video 3D printing



Video Virtual Reality



# Tools voor het maken en hergebruiken van content zone naar digitale (open) leermaterialen van het versnellingsplan



Sylvia Moes, innovation manager educational support  
 Universiteitsbibliotheek VU  
 Lid van de zone naar digitale (open) Leermaterialen

Contact us: vraag.ub@vu.nl

Wat doet de zone open leermaterialen?

Stappenplan Open Tekstboeken maken

Kieswijzer digitaal leermateriaal

Wat is er nog meer beschikbaar?

Met de zone **Naar digitale (open) leermaterialen** zetten we in op het **optimaal benutten van de mogelijkheden van digitale leermaterialen in het hoger onderwijs**. Het onderwijs is erbij gebaat wanneer docenten en studenten uit het **steeds rijkere aanbod van digitale leermaterialen gemakkelijk een voor hen optimale mix kunnen samenstellen en gebruiken**, ongeacht waar de materialen vandaan komen en of ze commercieel aangeboden of open te gebruiken zijn. Door een groter aanbod van eenvoudig toegankelijk leermateriaal kan beter worden aangesloten bij de visie van instellingen en docenten op onderwijs. **Meer gebruik van open leermaterialen verlaagt de kosten voor studenten.**

Om tot een optimale mix van leermaterialen te komen moeten gebruikers digitale leermaterialen makkelijk kunnen vinden, beoordelen en selecteren, eventueel naar behoefte kunnen aanpassen en uiteindelijk gebruiken. Daarnaast is het belangrijk dat gebruikers hun eigen leermateriaal gemakkelijk aan anderen beschikbaar kunnen stellen, om het aanbod van open digitale leermaterialen te vergroten en verrijken.



Dit stappenplan bevat good practices, instructies voor en expertise over het maken en publiceren van open tekstboeken.

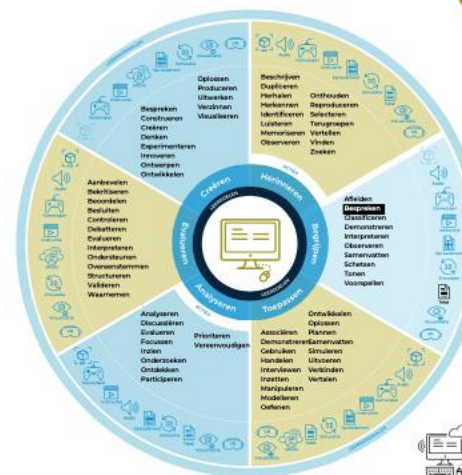


Meer weten?:



Via dit wiel is inzichtelijk gemaakt hoe verschillende soorten leermaterialen ingezet kunnen worden voor leeractiviteiten van lager naar hogere orde learning goals

Kies wijzer je digitaal leermateriaal!



Relatie leermateriaal en uitkomsten

Meer weten:



Verklaring en rapport  
 Nationale Aanpak  
 Digitale en Open  
 Leermaterialen

7 maart 2022



Proeftuin Onderwijs  
 met open  
 leermaterialen

11 oktober 2021



Infographic en  
 verslag:  
 inventarisatie open  
 tekstboeken

3 maart 2021

