

c^ovid-project

Seminar "Online collaborative learning with large images"

Turku, 10.02.2023

Bas de Leng: WWU Münster, Institute of Medical Education and Student Affairs (IfAS)



The creation of these resources has been (partially) funded by the ERASMUS+ grant program of the European Union under grant no. 2020-1-DE01-KA226-HE-005813. Neither the European Commission nor the project's national funding agency DAAD are responsible for the content or liable for any losses or damage resulting of the use of these resources.

General information

Website: <https://medicampus.uni-muenster.de/ccel/projects/cloid/>

- EU-project for ,digital education readiness‘
- From March 2021 to March 2023
- Three strategic partners



University of Turku

- Pauliina Kronqvist
- Laura Helle
- Mikko Mainulainen

University of Münster

- Bas de Leng
- Friedrich Pawelka

University Medical Center Utrecht

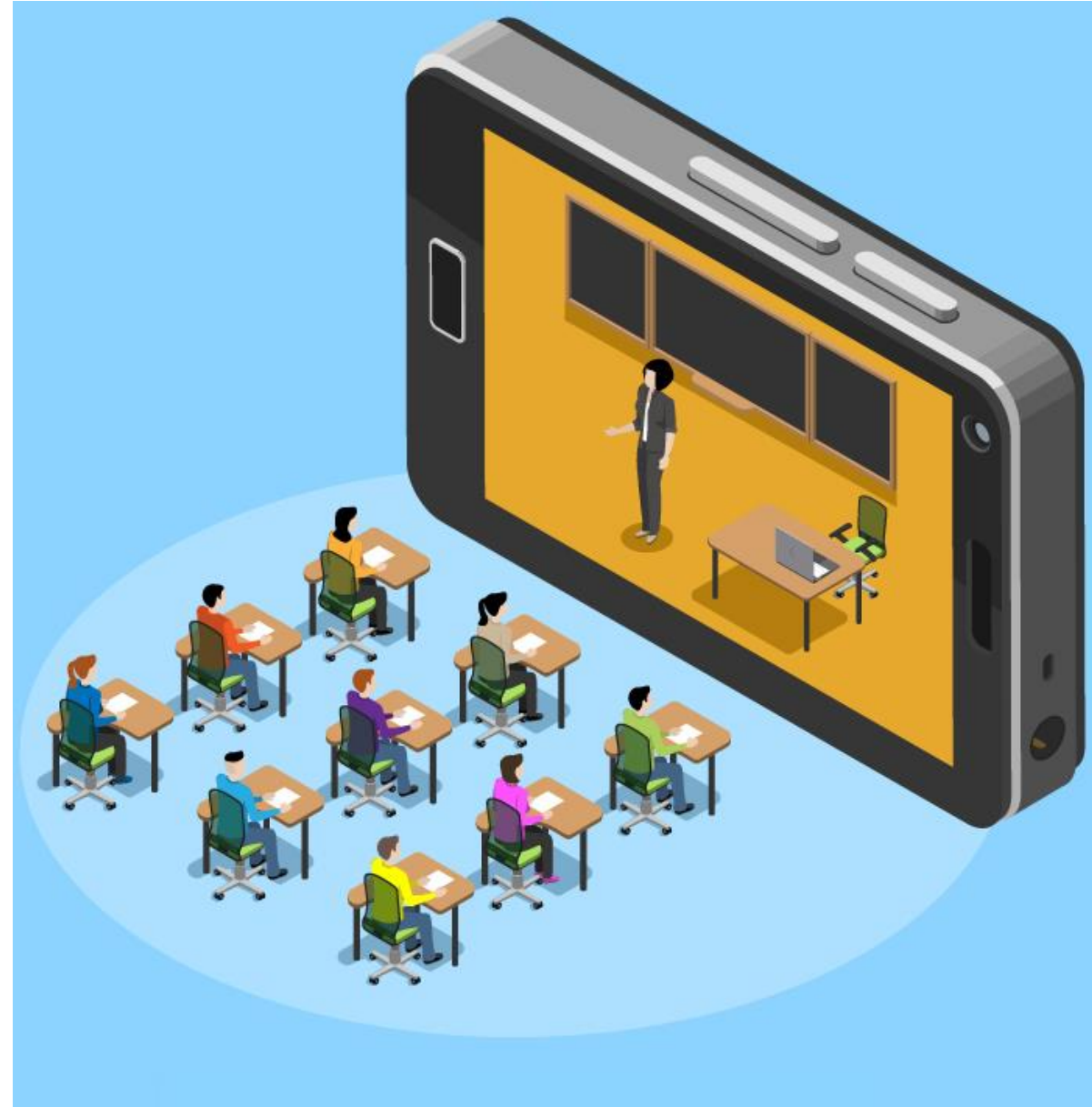
- Koen Vincken
- Christian Mol

Challenge

Passive learning



Emergency Remote Teaching



Online VQuest



Learning Dashboard



Deliverables

1. Tools
 - VQuest assessment software with open source-viewer for virtual slides
 - Learning Dashboard software for small group discussions
2. Training material for staff development
3. Content material for teaching microscopic pathology
4. Documentation for end-users (guides, videotutorials etc) and developers (templates, videotutorials etc)
5. Pilot implementations in medical education and their evaluation:
 - National and international

Process

Digital resources

- **Content**

Raw media, structured information

- Digital slides (WSIs)
- Texts and images
- Video tutorials

- **Tasks**

Interaction with content

- Tasks for patient cases (VQuest)
- Tasks for images (H5P)

- **Toolkit & supporting materials**

- PRISMA learning dashboard
- OMERO viewer



Teachers



Material for teaching

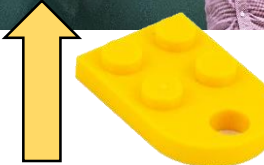
- **Scenarios**

Sequences of learning activities

- Course for medical study
- Training for residents pathology

- **Reports**

- Case studies



- **Professional development**

- Design of flipped classroom scenarios
- Development of selfstudy materials



Learning resources

Effective eLearning resources*

- Usability
 - Easily found
 - Durable, maintained
 - Quality assurance
 - Free from legal restrictions
 - Available at appropriate cost



* Littlejohn, A (2008). Characterising effective eLearning resources. Computers & Education, 50, 757-771

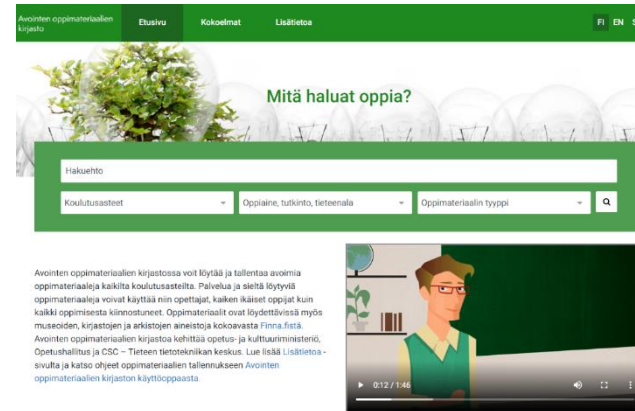
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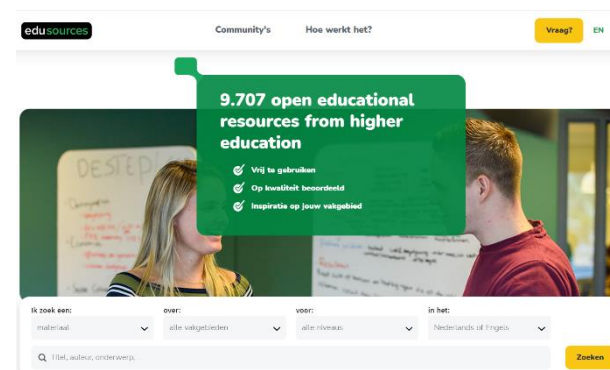
<https://erasmus-plus.ec.europa.eu/projects>



Library of Open Educational Resources; <https://aoe.fi/>



Open Resources Campus.nrw; <https://www.orca.nrw/>



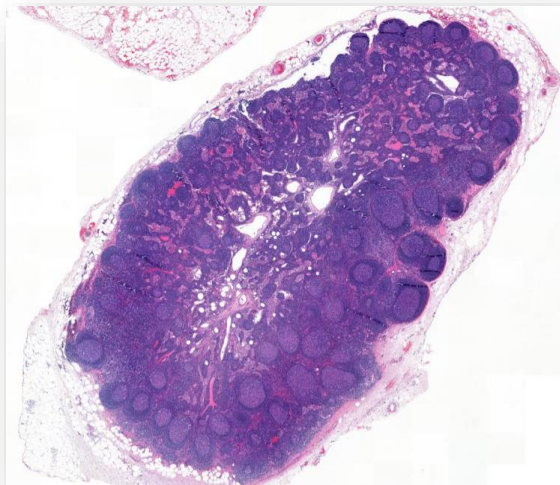
Netherlands: Edusources; <https://edusources.nl/>

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Whole Slide Image



118 Studies 13,666,719 Images 353 TB

Image Data Resource: <https://idr.openmicroscopy.org/>



Research Data Management for Microscopy and BioImage Analysis > Start

**NFDI4BIOIMAGE - a
consortium in the
National Research
Data Infrastructure**

NFDI: <https://nfdi4bioimage.de/en/start>

Learning resources

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H5P Interactive images

'Compare & Contrast' rounds (1/2)
Find the abnormal in 6 rounds.
One of these three lymph nodes is abnormal. Find and select the pathological lymph node!

Wrong, please compare the images again to find out why another specimen is correct.

0/1

Runde 3

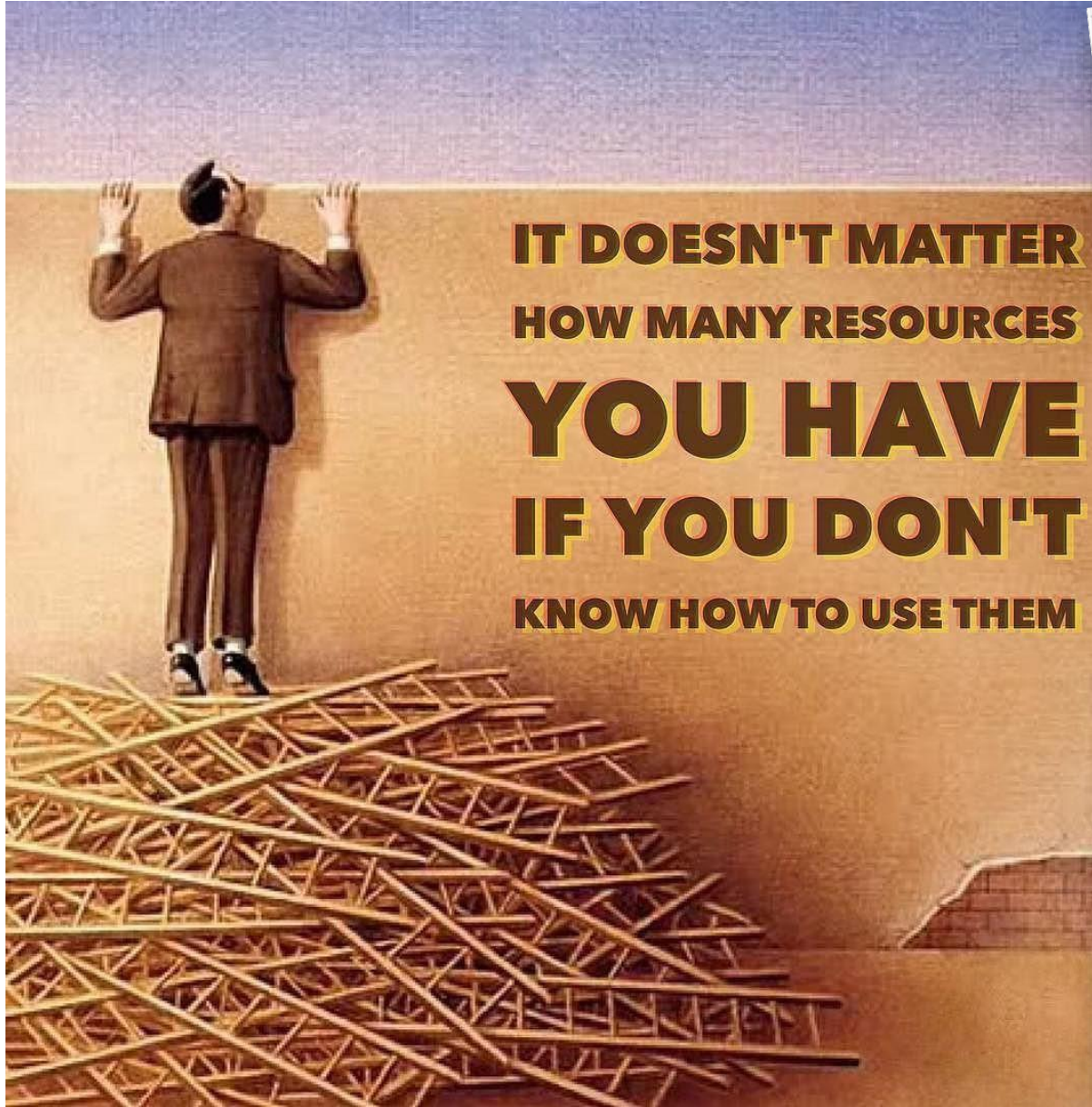
H5P Search h5p.org

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The H5P OER HUB
Facilitating global collaboration

feedback

<https://h5p.org/oer-hub-coming>



**IT DOESN'T MATTER
HOW MANY RESOURCES
YOU HAVE
IF YOU DON'T
KNOW HOW TO USE THEM**

COVID-project

Quick start

1. VQuest

Online VQuest

Learning Dashboard

Zoom

Co-funded by the European Union

The creation of these resources has been (partially) funded by the ERASMUS+ grant program of the European Union under grant no. 2020-1-DE01-KA226-HI-005813. Neither the European Commission nor the project's national funding agency DAAD are responsible for the content or liable for any losses or damages.

COVID-project

Quick start

2. PRISMA

Online VQuest

Learning Dashboard

Zoom

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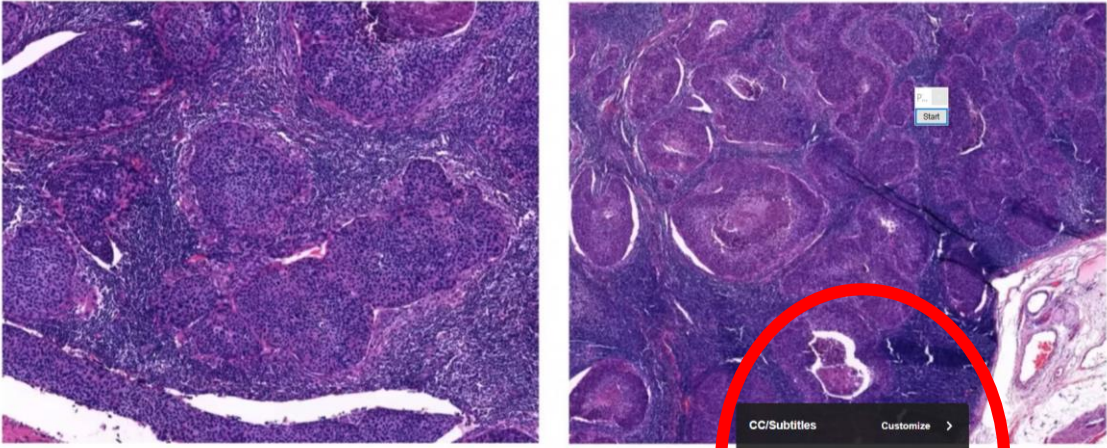
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Learning resources

Effective eLearning resources*

- Adoption by community
 - Accessible, commonly used format
 - Reusable and adaptable: appropriate granularity
 - Engage learner in meaningful learning activities
 - Authentic cases for target group

Clinical Pathology: Malignant lymph node



Content: Dr. Pauliina Kronqvist, Pathologist Turku University Hospital

covid-project

04:01

CC/Subtitles Customize >

▼ Deutsch

English

None

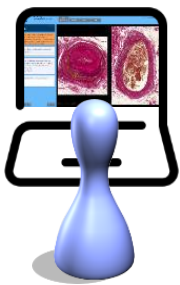
The content of these resources has been funded by the EMAMU/In grant of the European Union under the Marie Skłodowska Curie grant agreement No 101019719. Neither the European Commission nor the project's national funding agency ISAE are responsible for the content or liable for any losses or damage resulting from the use of these resources.

Videos

- Streaming & downloadable files
- Adaptable: voice-overs, subtitles

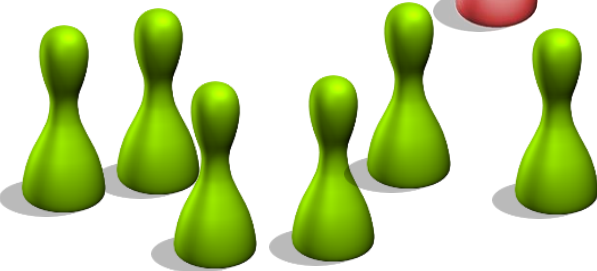
Scenario's

1) Active learning



VQuest

2) Collaborative learning



PRISMA Learning Dashboard



Digital resources



Teachers



Material for teaching



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- **Senarios**

Sequences of learning activities

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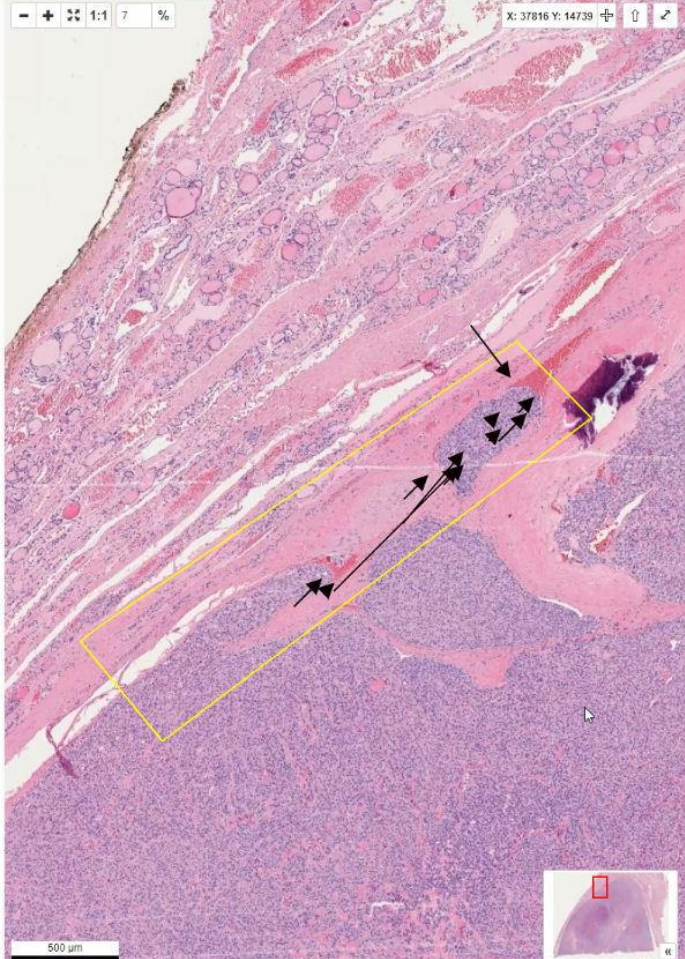


Screencast teaching-session

VQuest Online cLovid Residence training 15 datasets for Chris (chris) +14 more

Overview no time filter set

CASE01_RESIDENTS CASE02_RESIDENTS **CASE03_RESIDENTS** CASE04_RESIDENTS CASE05_RESIDENTS CASE06_RESIDENTS CASE07_RESIDENTS CASE08_RESIDENTS



X: 37816 Y: 14739

500 µm

Case03_Residents

What is your pathological-anatomical diagnosis for the tumor?

- Follicular thyroid carcinoma
- Papillary thyroid carcinoma
- Oncocytic carcinoma
- follikulaarinen adenooma*
- Invasive encapsulated follicular variant papillary carcinoma

Explain briefly why you chose this diagnosis.

Is there capsular invasion? Frequency

No	8
Yes	3

If you answered yes, place the marker on the invasion you have identified. If you answered no, you can skip this question. (N = 4)

Is there vascular invasion? Frequency

Yes	11
No	1

If you answered yes, place the marker on the invasion you have identified. If you answered no, you can skip this question. (N = 11)

Is there tumor necrosis? Frequency ↓


No	9
Yes	2

If you answered yes, place the marker on the necrosis you have identified. If you answered no, you can skip this question. (N = 2)


Is there 3 or more mitoses per 2 mm²? Frequency ↓

No	10
Yes	2


Stummschalten




Bas de Leng (University of Muenster)



Vesa-Matti Pohjanen



Koen Vincken (VQuest)



Friedrich Pawelka



Thanks for your attention

cLovid website:

<https://medicampus.uni-muenster.de/ccel/projects/clovid/>