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2020 Key issues for teaching and learning with technology in higher education (HE)

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Training Workshop at Aveiro, 24-28/2/2020

ISPAB
Instituto Superior de Paços de Brandão

Greetings from Greece!

Καλημέρα!
Good morning!

University of Patras

3rd largest public university in Greece

Since 1964

29.901 undergraduates

3.931 postgraduates

7 Schools

35 Departments

49 Postgraduate Programs of Studies

161 Laboratories

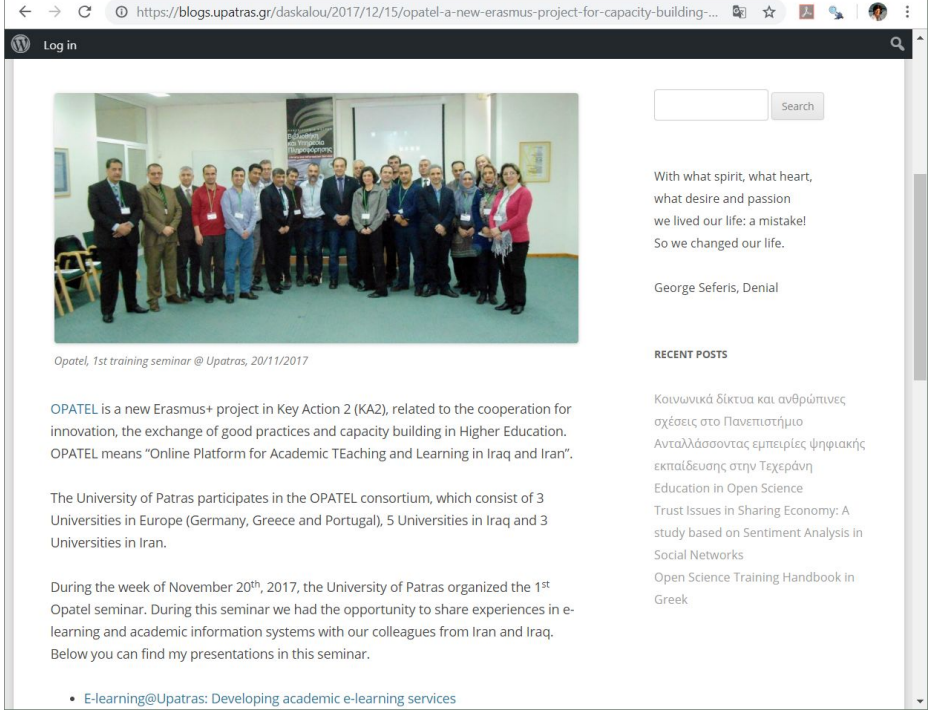
17 Clinics

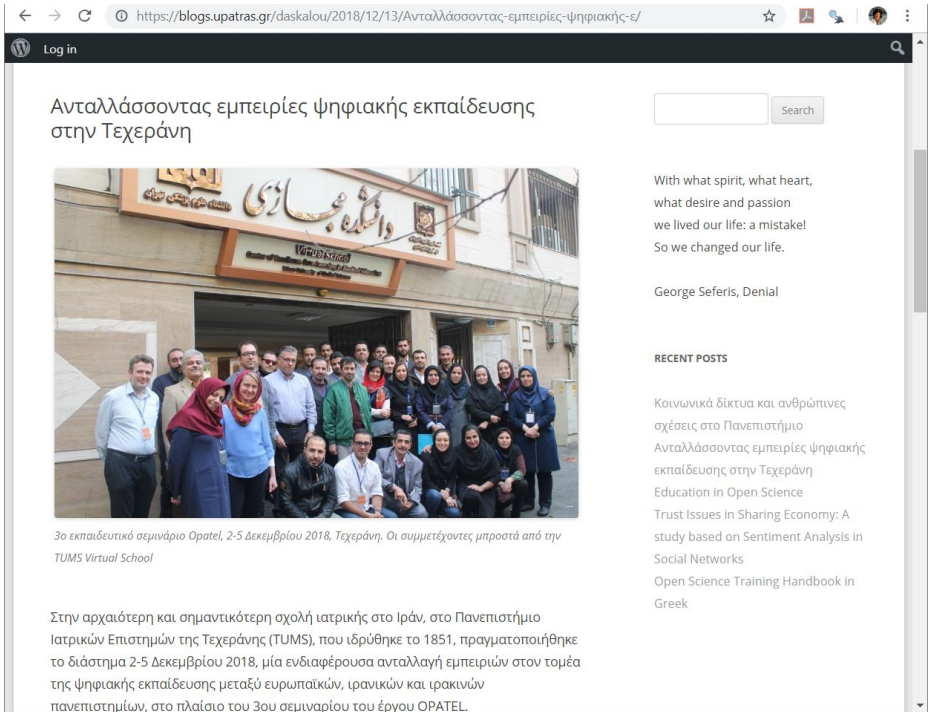
715 Faculty + 226 teaching staff

6/2019

About me

https://blogs.upatras.gr/daskalou/





Scope of presentation

Discuss 2020 key issues in Teaching and Learning with technology for HE

Inspiration: EU Digital Agenda Action Plan, EDUCAUSE Horizon Report

Learning objectives

- Recall important developments in educational technology for HE
- Analyse critical issues in teaching and learning for HEI & propose solutions

Important developments in technology for HE

Developments in educational technology for HE (½)

Meet students' expectations of constant access to platforms, learning materials, and resources to learn anywhere and anytime.

- Digitization of instructor-led training to blended or fully online learning
- Mobile learning
- Personalized learning (undepersonalized teaching) (Feldstein & Hill, 2016)
- Microlearning
- Games & Gamification

Developments in educational technology for HE (2/2)

Support learner experiences in emerging learning spaces programmed into extended reality (XR)

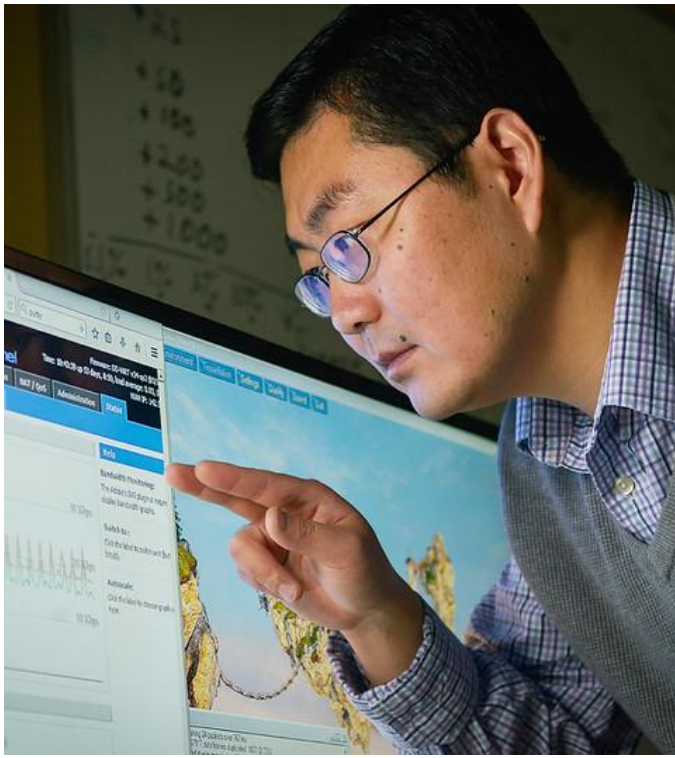
- Video & Interactive video
- Mixed Reality
- Analytics Technologies
- Artificial Intelligence
- Virtual Assistants

Key issues for teaching and learning in HE

#1: Faculty Development and Engagement

How we involve faculty in Ed Tech?

How we enable faculty to craft active learning engagement that achieve learning objectives?



Active learning

anything that involves learners in *doing* and *thinking* about what they are doing

Traditional teaching — Learning by doing

Low student involvement — High student involvement

Passive vs. Active Learning

Passive Learning

Receiving Information & Ideas

Active Learning

Experience **with:** **Reflective *Dialogue***

- **Doing**
- **Self**
- **Observing**
- **Others**

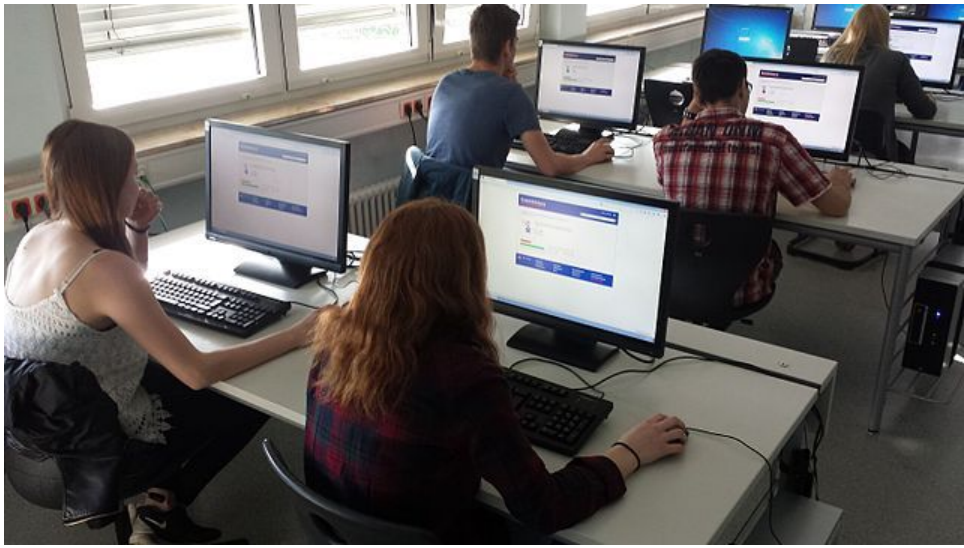
(Fink, 2003)

Faculty Development and Engagement: Hows?

- Include faculty in planning, evaluation and implementation of any teaching and learning initiative
- Implement training and professional development for faculty using a personalised or consultancy approach
- Use “Centers for teaching and learning”
- The role of instructional designers

#2: Blended learning designs

How do we construct course models to serve the effective integration of both online and face-to-face educational activities?



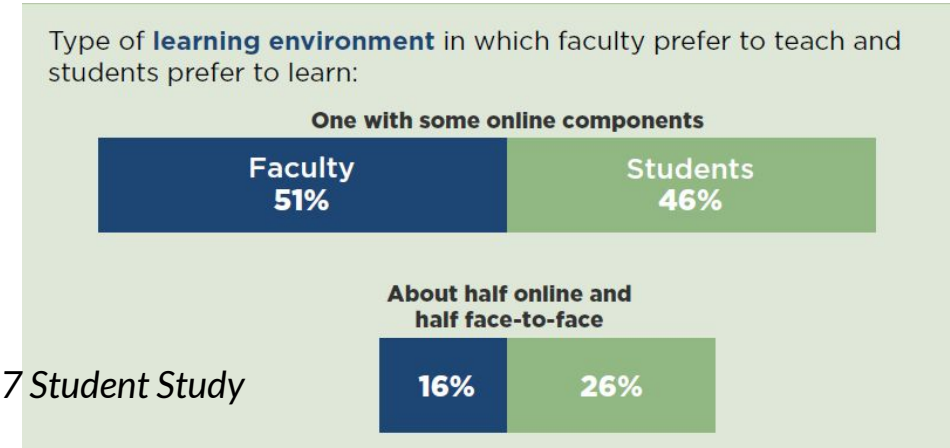
Computer and students, by Triplec85

Blended learning designs: Hows?

What is the right "blend"?

1. *Low-impact*: an online activity is added to an existing module
2. *Medium-impact*: an online activity replaces an existing activity
3. *High-impact*: develop a blended module from the outset or redesigning of a face-to-face module

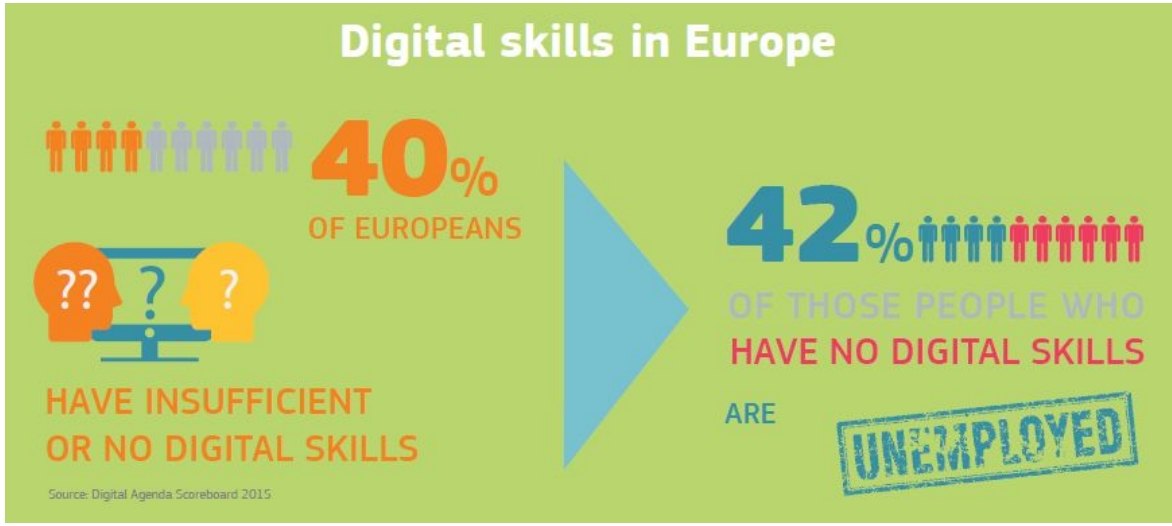
(*The Blended Learning Design Framework*, *2020*)



Source: ECAR 2017 Faculty Study and 2017 Student Study

#3: Digital competencies

How do we nurture students' digital competencies?

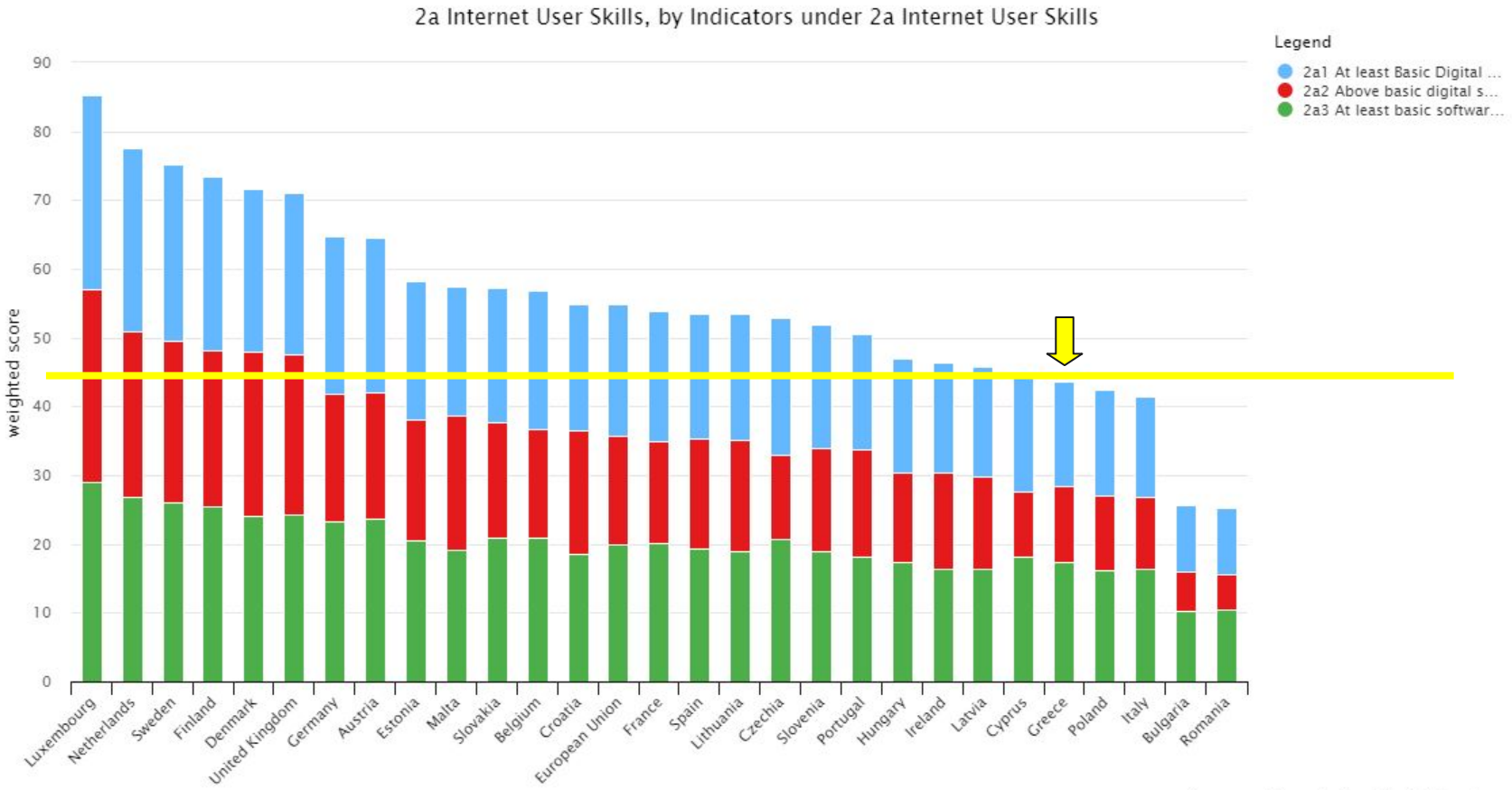


Source: Why - what - for whom is DigComp 2.0

Digital competence ≠ use of ICT tools

Digital competence
= confident & critical use of ICT

#3: Digital competencies: Why for Greece?



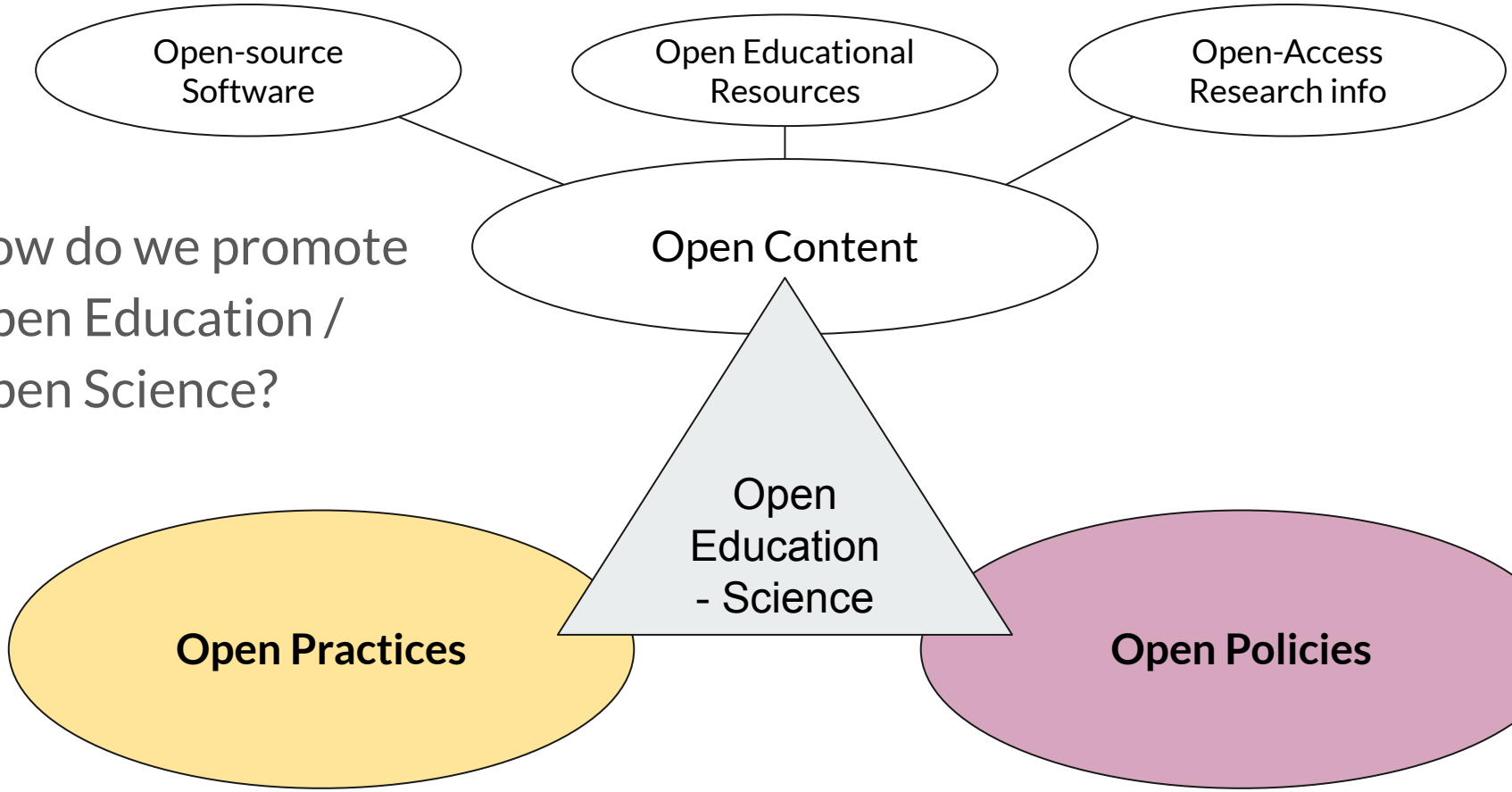
Source: Digital Economy and Society Index (DESI)

The EU Digital Competence Framework for citizens (DigiComp)

Source: https://ec.europa.eu/jrc/digcomp

Find ideas to integrate DigiComp in your curricula by:

#4 Open Education-Open Science



How do we promote Open Education / Open Science?

Open Education-Open Science: Hows?

Open Practices

- Involve student in active, constructive engagement with open content, tools and services in the learning process
- Students actively shape their learning (e.g by developing personalized projects) and contributing to public knowledge (by creating and sharing OER)

Open Policies

- Content created with public funding is openly licensed and make widely accessible to public
- Link open content and open practices to specific educational goals (e.g. goal to make access to education more equitable and affordable)
- Give intensives to faculty

#5 Advancing cultures for innovation

How do we establish a culture for innovation in our learners?

How do we promote youth entrepreneurship?

“Learning from failure”?

Patras Innovation Quest

The EU Entrepreneurship Competence Framework (EntreComp)

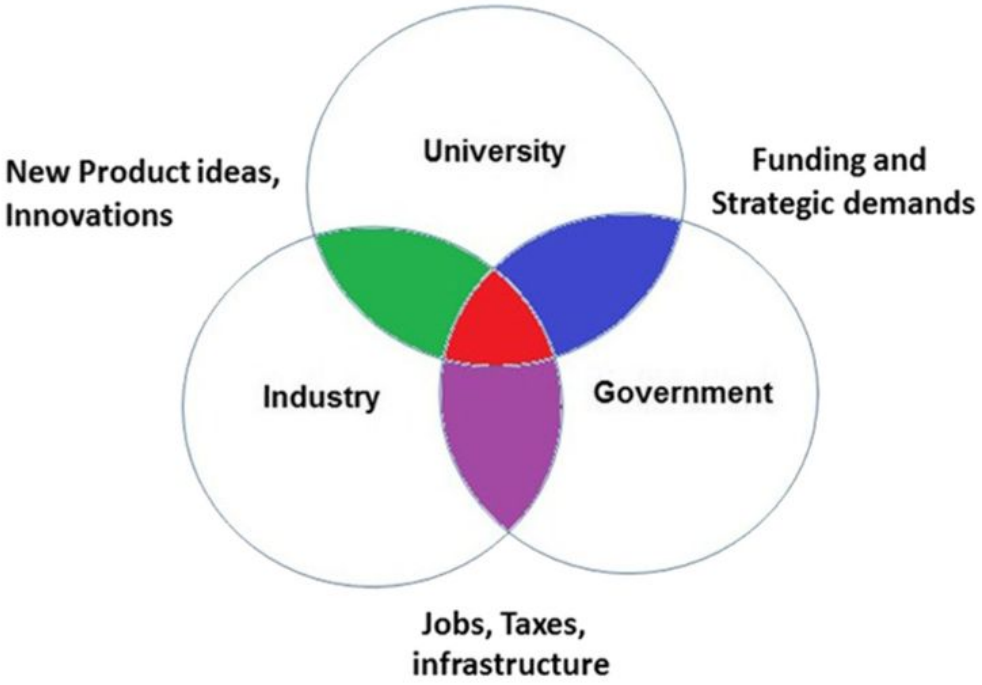
Source: https://ec.europa.eu/jrc/entrecomp

Get ideas to support the development and understanding of entrepreneurial competence in your HEI by:

Cultivating the entrepreneurial mindset

At the Institutional Level

- Policy for supporting innovation & youth entrepreneurship
- Pre-incubator unit and related activities
- Interact in the Triple Helix model for innovation



The Triple Helix model for innovation

Cultivating the entrepreneurial mindset

Departamental & Course level

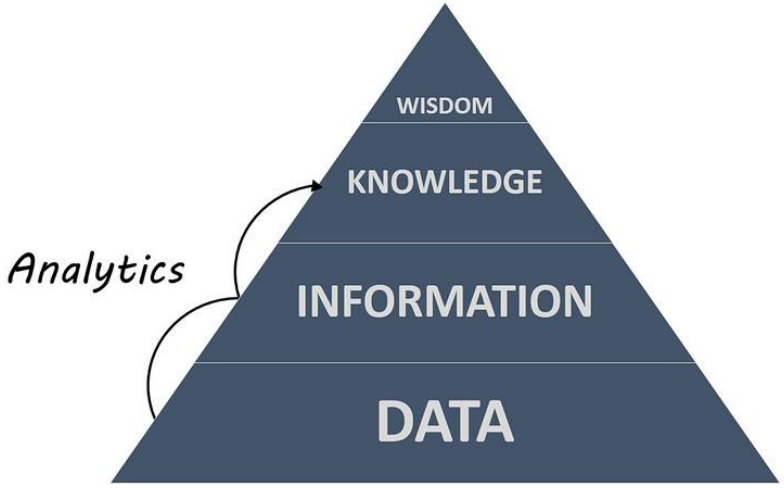
- Follow related practices at courses:
  - Value co-creation for the society
  - Experimentation
  - Collaboration and teamwork
  - Learning by doing or problem-based learning

Students present their digital enterprise project at the Digital economy course of the Department of Economics, UPAT

#7 Improving education through better data analysis

How do we use data to improve student success?

What are the opportunities and challenges in using data analysis in education?



Analytics in education

Challenges

- **Intrusive** or a **violation of trust?**
- **Misunderstood?** (e.g. simple indicators misinterpreted as reflecting broader institutional performance or used to rank)
- **Time and resource** consuming
- **Ethical** and **moral** concerns

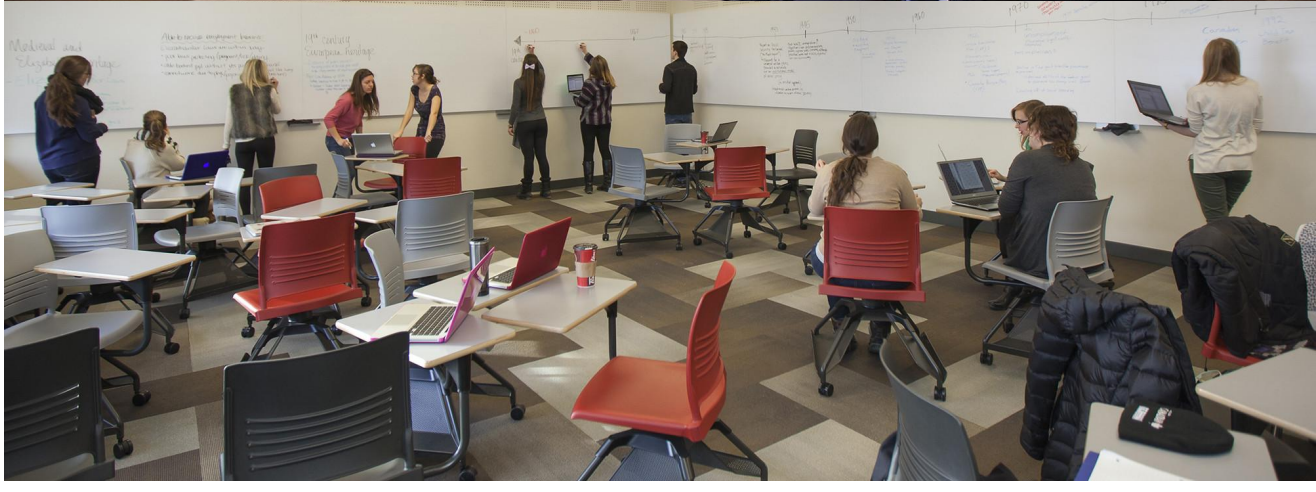
Opportunities

- Capture and measure **student success or failure** (eg drop-out) and **assist students** in decisions
- Improve decision making at institutional or individual level and enable interventions

#8 Learning spaces and makerspaces

How can we redesign learning spaces?

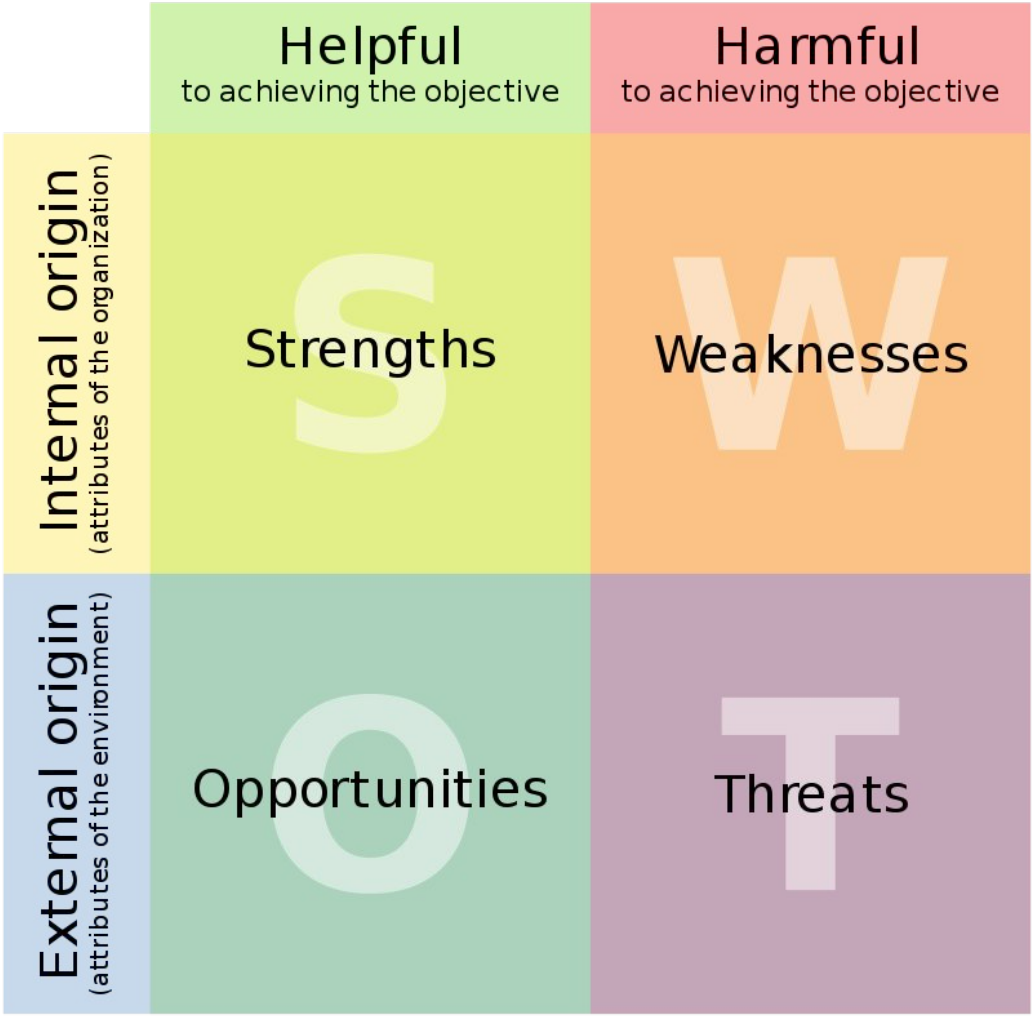
What about makerspaces?



Let’s prepare our institutions for educational technologies of the future…

Discuss with us opportunities and challenges in our next brainstorming session!

SWOT analysis



Education can change our future!

Thank you!

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Questions?

You can find my previous OPATEL presentations here

Reference notes (½)

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Reference notes (2/2)

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Annex

EDUCAUSE Learning Initiative (ELI): 2019 Key issues in Teaching and Learning

1. Faculty Development and Engagement
2. Online and Blended Learning
3. Digital and Information Literacy
4. Accessibility and Universal Design for Learning (UDL)
5. Learning Analytics
6. Open Education
7. Evaluating Instructional and Learning Innovations
8. Academic Transformation
9. Adaptive Teaching and Learning
10. Learning Spaces (including Makerspaces)
11. Microcredentialing and Digital Badging
12. Digital Learning Architectures
13. Integrated Planning and Advising Systems for Student Success

Source: https://www.educause.edu/eli/initiatives/key-issues-in-teaching-and-learning

Educause Important Developments in Educational Technology in HE (2012-2019)

- Analytics Technologies
- Adaptive Learning Technologies
- Games and Gamification
- The Internet of Things
- Mobile Learning
- Natural User Interfaces
- Bring Your Own Device
- Makerspaces
- Flipped Classroom
- Wearable Technology
- 3D Printing
- Tablet Computing
- Artificial Intelligence
- Next-Generation LMS
- Affective Computing
- Mixed Reality
- Robotics
- Quantified Self
- Virtual Assistants
- Massive Open Online Courses
- Blockchain