

# SELFIE's sister projects on Learning and Skills

**Yves Punie. PhD**

Deputy Head of Unit, JRC.B.4, Human Capital and Employment, Seville

**@yves998**

**The European Commission's  
science and knowledge service**  
Joint Research Centre



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**European  
Commission**

# Digital Skills and digital learning challenges are high on European agenda

- Digital Education Action Plan, 2018
- Council Recommendation on Key Competences for Lifelong Learning, 2018
- School development and excellent teaching for a great start in life, 2017
- A renewed European agenda for Higher Education, 2017
- New Skills Agenda, 2016
- Digital Single Market, 2015

# JRC Competence frameworks

- Digital Competence framework for citizens (DigComp)
  - Digital Competence framework for consumers (DigCompConsumer)
- Digital Competence framework for educators (DigCompEdu)
- Digital Competence framework for educational organisations (DigCompOrg) and SELFIE
- Open Education framework for higher education institutions (OpenEdu)
- Entrepreneurship Competence framework for individuals (EntreComp)
- **NEW:** Personal, Social, Learning to Learn competence framework for individuals (LifeComp)

# Why all these frameworks?

Capacity building for transformation of E&T; addressing skills challenges in the digital age

## *What?*

- Reference frameworks providing an overall, complete and shared understanding
- Conceptual model, proficiency levels & (self-)assessment modules

## *Multiple uses:*

- Curricula, teacher training, assessment/reflection, policies, practical initiatives, measurement, etc...

## *JRC contribution:*

- Strong scientific underpinning + consensus building
- European view, independent of national or commercial interests
- Facilitating peer learning and exchange, sharing of evidence and analysis

# Links between the frameworks...?



# Links between the frameworks

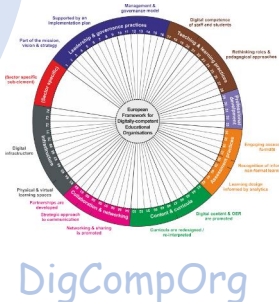


Competence	Competence
1. Information and data literacy	1.1. Searching, identifying and filtering information on specific topics and issues
2. Communication and media literacy	2.1. Evaluating and creating content on specific topics and issues
3. Digital content creation	3.1. Managing digital identity and profile in the digital marketplace
4. Problem solving	4.1. Identifying, analysing and solving digital problems
5. Security	5.1. Managing personal data and privacy
	5.2. Managing personal data and privacy
	5.3. Managing personal data and privacy
	5.4. Managing personal data and privacy
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	5.11. Managing personal data and privacy
	5.12. Managing personal data and privacy

DigCompConsumer



DigCompEdu



OpenEdu

The diagram is a circle divided into four equal quadrants by a horizontal and a vertical line. The quadrants are labeled as follows:

- Top-left quadrant (dark blue):** Labeled "Learners" in white text.
- Top-right quadrant (medium blue):** Labeled "Educators/trainers" in white text.
- Bottom-left quadrant (light blue with a dot pattern):** Labeled "E&T system" in white text.
- Bottom-right quadrant (light blue):** Labeled "E&T organisations" in white text.

Two curved arrows indicate a clockwise flow between the quadrants: one arrow points from the "Learners" quadrant to the "Educators/trainers" quadrant, and another arrow points from the "Educators/trainers" quadrant to the "E&T organisations" quadrant.



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## DigCompOrg -> SELFIE for schools: holistic view

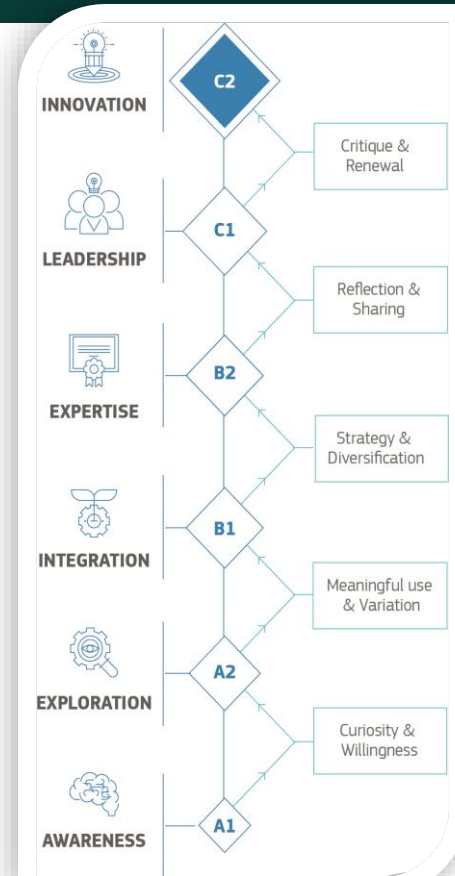
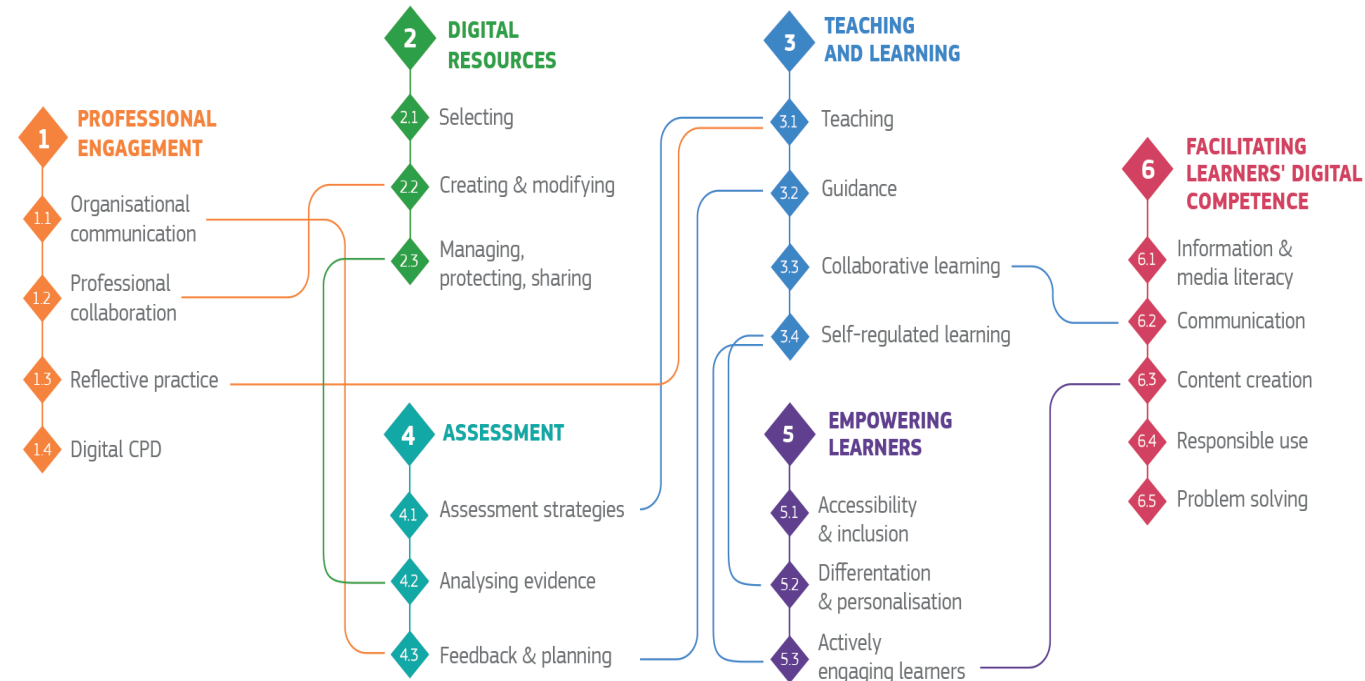
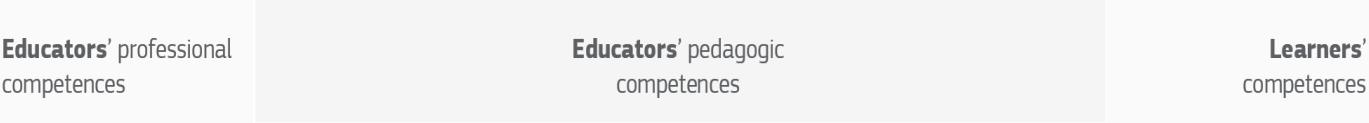




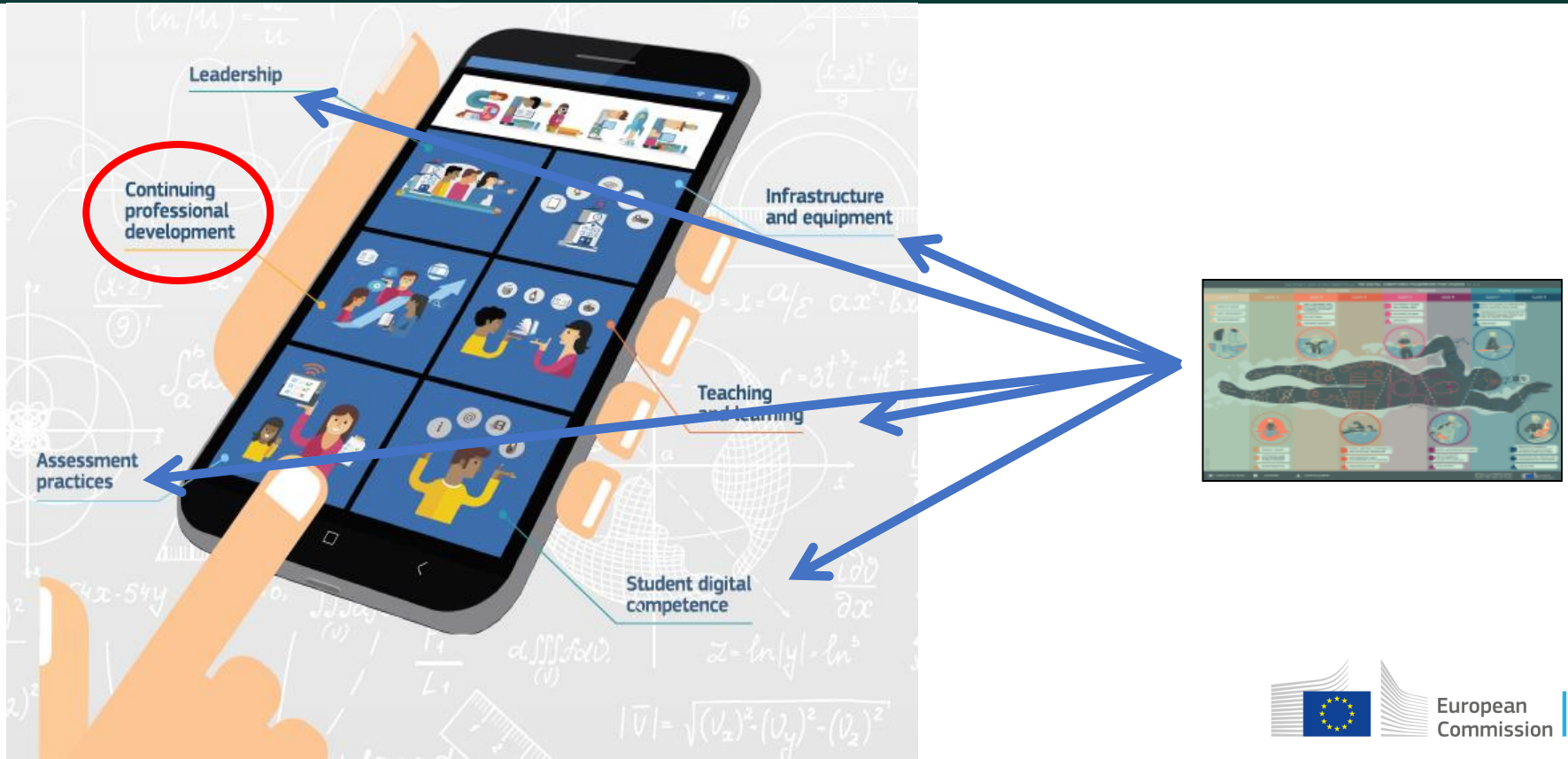
# DigCompEdu and SELFIE



# DigCompEdu: holistic view

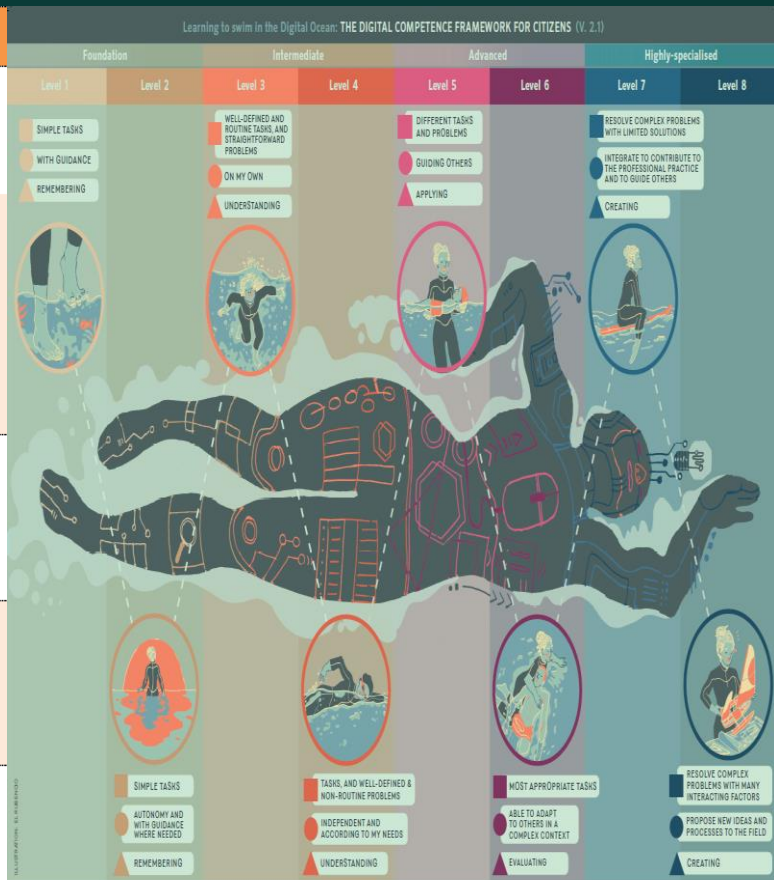


# DigComp and SELFIE



# DigComp also quite encompassing/holistic

Competence areas	Competences
1. Information and data literacy	1.1 Browsing, searching and filtering data, information and digital content 1.2 Evaluating data, information and digital content 1.3 Managing data, information and digital content
2. Communication and collaboration	2.1 Interacting through digital technologies 2.2 Sharing through digital technologies 2.3 Engaging in citizenship through digital technologies 2.4 Collaborating through digital technologies 2.5 Netiquette 2.6 Managing digital identity
3. Digital content creation	3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.3 Copyright and licences 3.4 Programming
4. Safety	4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment
5. Problem solving	5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies



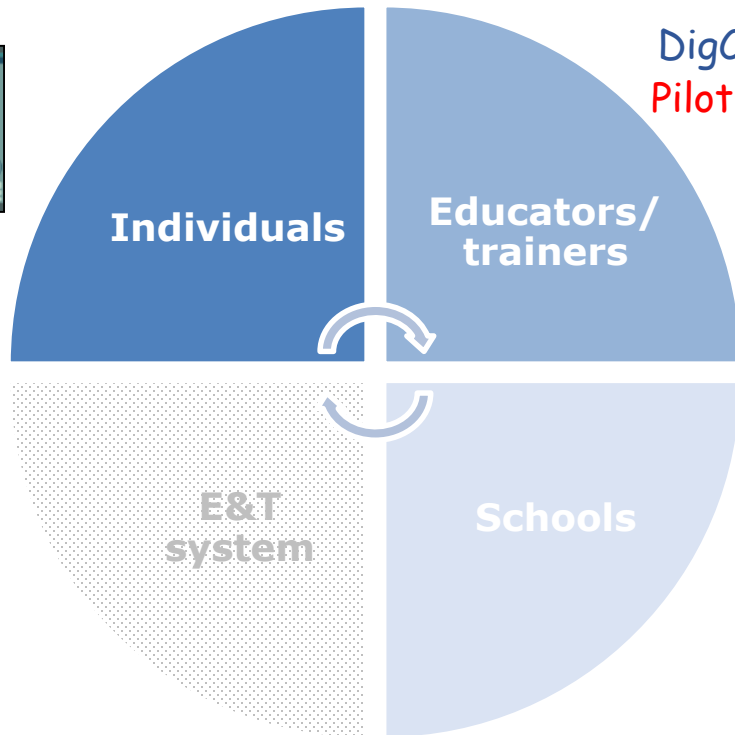
# DigComp, DigCompEdu, DigCompOrg/SELFIE

- Strong interlinkages between the frameworks; their aim is to be structural/comprehensive
- Differences lies within the angles you take: learner, educator, organisation, policymaker
- However, we do understand there is a need to clarify differences and similarities, and to explore how these frameworks can work together -> more work to be done
- Technological progress, especially **Artificial Intelligence**, might require us to revise the frameworks anyway
  - Changing skills requirements as a result of AI and automation impact on jobs/tasks
  - Need for AI skills at all levels (specialist, professionals/**educators**, citizens/**learners**)
  - Impact of AI on E&T, and on LLL

# Self-reflection/self-assessment tools



DigCompSat  
Pilot by Dec 2019

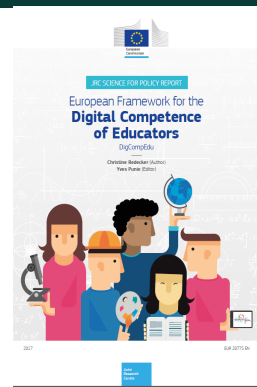


DigCompEdu Check-in  
Pilot until 31/07/2019

DigCompEduSat  
Pilot by Dec 2019



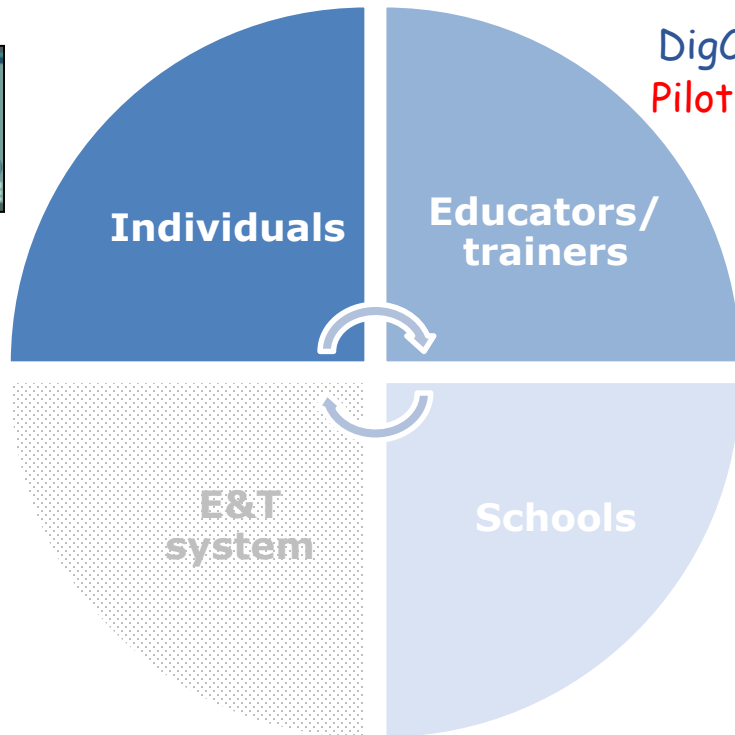
SELFIE



# Self-reflection/self-assessment tools

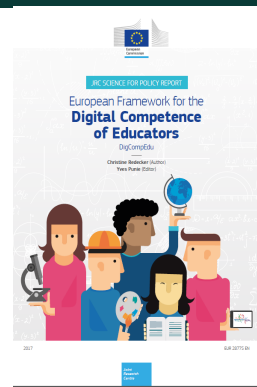


DigCompSat  
Pilot by Dec 2019



DigCompEdu Check-in  
Pilot until 31/07/2019

DigCompEduSat  
Pilot by Dec 2019



SELFIE





# Challenges related to (self-)assessment/reflection tools

- Strong need for conceptual clarifications
- Different types of assessment (direct/indirect; knowledge/tasks, practices, perceptions)
- How to deal with proficiency levels?
- European Commission tools and links with other European, MS national/regional tools
- Limited academic research on assessment of digital competence (Meelisen, 2008)
  - Little consensus on what should be assessed and how (Maderick et al 2015)
  - Existing instruments usually only assess some elements (Siddiq et al., 2016)
  - Lack of transparency on assessment methodologies; lack of reliability (e.g. item tests) and validity studies

➔ **Depends on the purpose** but it is always a cost-benefit compromise



# 2018-2019 selected publications on digital age learning

## 2019

- Methodological guide for implementation and evaluation of open e-textbooks programmes (March 2019)
- Innovating CPD in Compulsory Education (February 2019)

### **Upcoming**

- Innovating PD in Higher Education (May)
- Innovative forms of assessment (May)
- Practical Guidelines on Open Education for Academics (June)
- The use of reference frameworks to support digitally competent citizens – the case of DigComp, ITU report (Autumn)
- "Digital Competence of Educators (DigCompEdu): Development and Evaluation of a Self-Assessment Instrument for Teachers' Digital Competence". Paper

### **Planned**

- Results from SELFIE & from SELFIE VET-WBL feasibility
- Educational Makerspaces in Europe: exploring future implications
- AI for and with Teachers; ....

## 2018

- Impact of Artificial Intelligence on Learning, Teaching and Education (November)
- Who is taking MOOCs for teachers' professional development on the use of ICT? A cross-sectional study from Spain, Technology, Pedagogy & Education (October)
- Free Digital Learning for Inclusion of Migrants and Refugees in Europe: A Qualitative Analysis of Three Types of Learning Purposes, IRRODL (May)
- DigComp into Action: Get inspired, make it happen (May)
- Can digital technologies help reduce the immigrant-native educational achievement gap? (PISA 2015) (Jan)
- EntreComp into Action - Get inspired, make it happen (March)



# Thank you



yves.punie@ec.europa.eu

@yves998

<https://ec.europa.eu/jrc/en/research-topic/learning-and-skills>