

# The European Commission's science and knowledge service

Joint Research Centre



# **DigCompEdu**

The European Framework  
for the Digital Competence  
of Educators

**Christine Redecker**

November 2018

# Joint Research Centre (JRC) at a glance

**3000 staff**

Almost 75% are scientists  
and researchers.

Headquarters in Brussels Research facilities  
located in 5 Member States.

**Direcorate B**  
**"Growth & Innovation"**

**Human Capital &  
Employment**



# What we do...

## Competence frameworks

- For citizens, learners, teachers and trainers
- For educational organisations

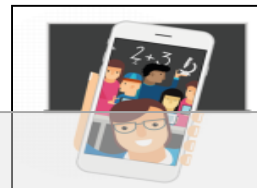
DigComp



DigCompEdu



SELFIE



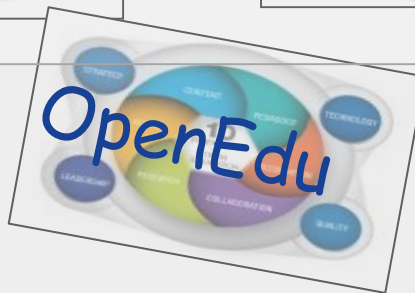
Entre  
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PSL  
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OpenEdu



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Commission

# ...and why

## Council Recommendation on Key Competences for Lifelong Learning (2018)

- 1) Literacy competence
- 2) Multilingual competence
- 3) Mathematical competence and competence in science, technology and engineering
- 4) **Digital competence**
- 5) **Personal, social and learning to learn competence**
- 6) Citizenship competence
- 7) **Entrepreneurship competence**
- 8) Cultural awareness and expression competence



## Digital Education Action Plan

17 January 2018

- Making better use of digital technology for teaching and learning
- Developing relevant digital competences and skills for the digital transformation
- Improving education through better data analysis and foresight



# JRC Frameworks for Digital Competence

DigComp



**Digital Competence**  
Of citizens for  
**Life in a Digital Age**



**Professional  
Digital Competence of Educators**  
To modernise education  
in a digital age



**SELFIE**

**Digital Capacity  
of Schools**



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# SELFIE



SELFIE



[https://www.youtube.com/watch?v=n\\_Ma0-2f\\_1w](https://www.youtube.com/watch?v=n_Ma0-2f_1w)

More information:

<https://ec.europa.eu/education/schools-go-digital>

# DigComp

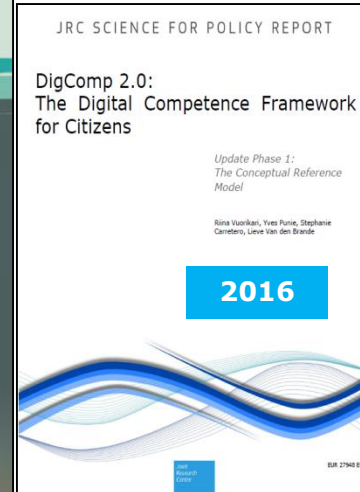
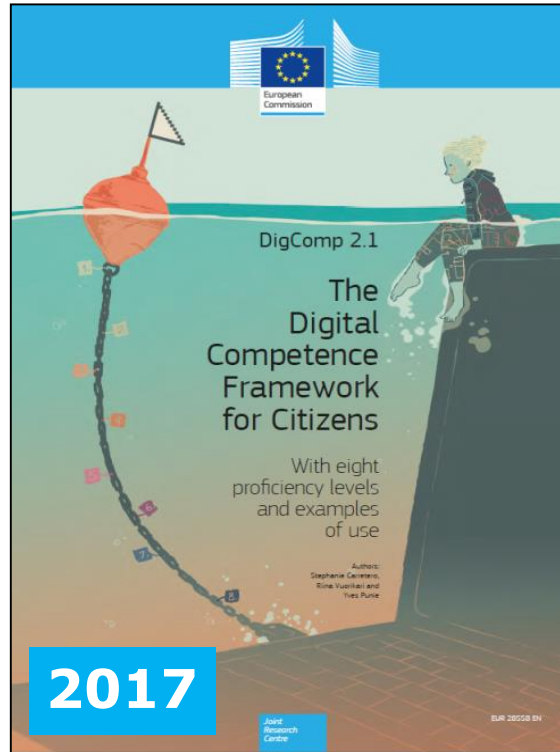




# DigComp

## Definition:

Digital Competence involves the **confident, critical and responsible** use of, and **engagement** with, digital technologies for learning, at work, and for participation in society {COM (2018) 24 final}



# DIGCOMP 2.0

## THE DIGITAL COMPETENCE FRAMEWORK FOR CITIZENS THE COMPETENCES



# DigComp

## 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

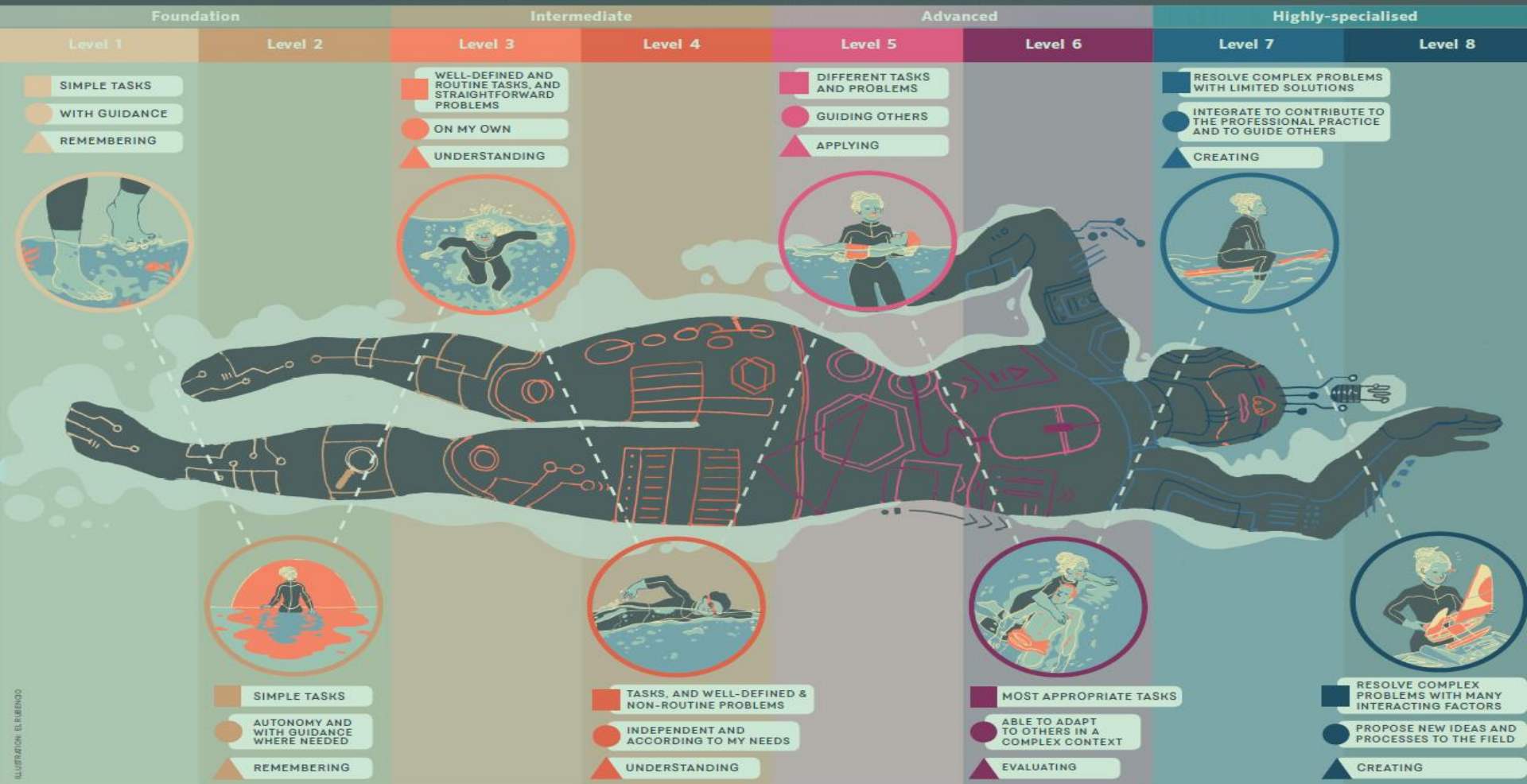
- 3.1 Developing digital content
- 3.2 Integrating and re-elaborating digital content
- 3.3 Copyright and licences
- 3.4 Programming

## 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
- 5.4 Identifying digital competence gaps



# User Guide



50 content items from

38 unique examples



<https://bit.ly/2NBWmdE>

# Example: Germany

# Students

Dig Comp	KMK Strategy
<b>1.</b>	<b>1. Suchen, Verarbeiten und Aufbewahren</b>
1.1	1.1. Suchen und Filtern
1.2	1.2. Auswerten und Bewerten
1.3	1.3. Speichern und Abrufen
<b>2.</b>	<b>2. Kommunizieren und Kooperieren</b>
2.1	2.1. Interagieren
2.2	2.2. Teilen
2.4	2.3. Zusammenarbeiten
2.5	2.4. Umgangsregeln kennen und einhalten (Netiquette)
2.3	2.5. An der Gesellschaft aktiv teilhaben
<b>3.</b>	<b>3. Produzieren und Präsentieren</b>
3.1	3.1. Entwickeln und Produzieren
3.2	3.2. Weiterverarbeiten und Integrieren
3.3	3.3. Rechtliche Vorgaben beachten



<b>4.</b>	<b>4. Schützen und sicher Agieren</b>
4.1	4.1. Sicher in digitalen Umgebungen agieren
2.6	
4.2	4.2. Persönliche Daten und Privatsphäre schützen
4.3	4.3. Gesundheit schützen
4.4	4.4. Natur und Umwelt schützen
<b>5.</b>	<b>5. Problemlösen und Handeln</b>
5.1	5.1. Technische Probleme lösen
5.2	5.2. Werkzeuge bedarfsgerecht einsetzen
5.4	5.3. Eigene Defizite ermitteln und nach Lösungen suchen
5.3	5.4. Digitale Werkzeuge und Medien zum Lernen, Arbeiten und Problemlösen nutzen
3.4	5.5. Algorithmen erkennen und formulieren
-	<b>6. Analysieren und Reflektieren</b>
-	6.1. Medien analysieren und bewerten
-	6.2. Medien in der digitalen Welt verstehen und reflektieren



# Example: Spain

# Teachers



[http://aprende.educalab.es/wp-content/uploads/2017/11/2017\\_1020\\_Marco-Com%C3%BAn-de-Competencia-Digital-Docente.pdf](http://aprende.educalab.es/wp-content/uploads/2017/11/2017_1020_Marco-Com%C3%BAn-de-Competencia-Digital-Docente.pdf)

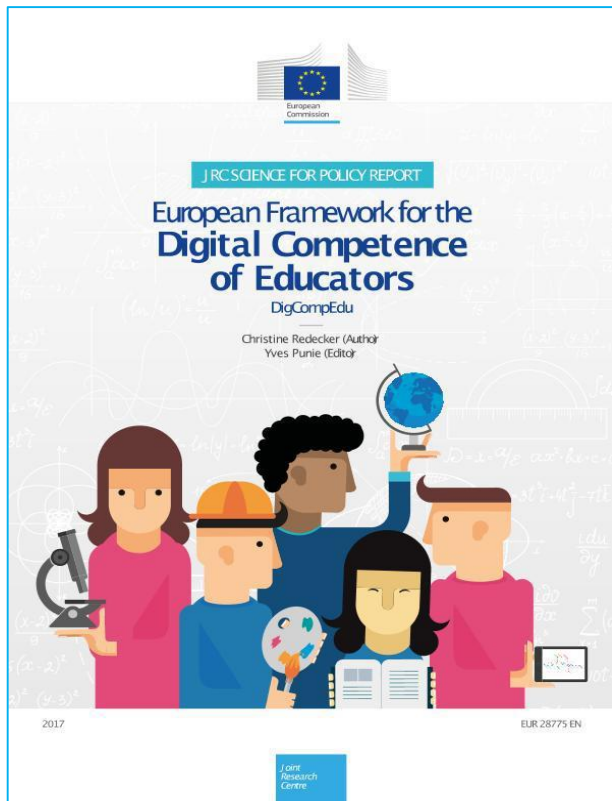
## Estructura del Portfolio de la Competencia Digital Docente







# The Framework



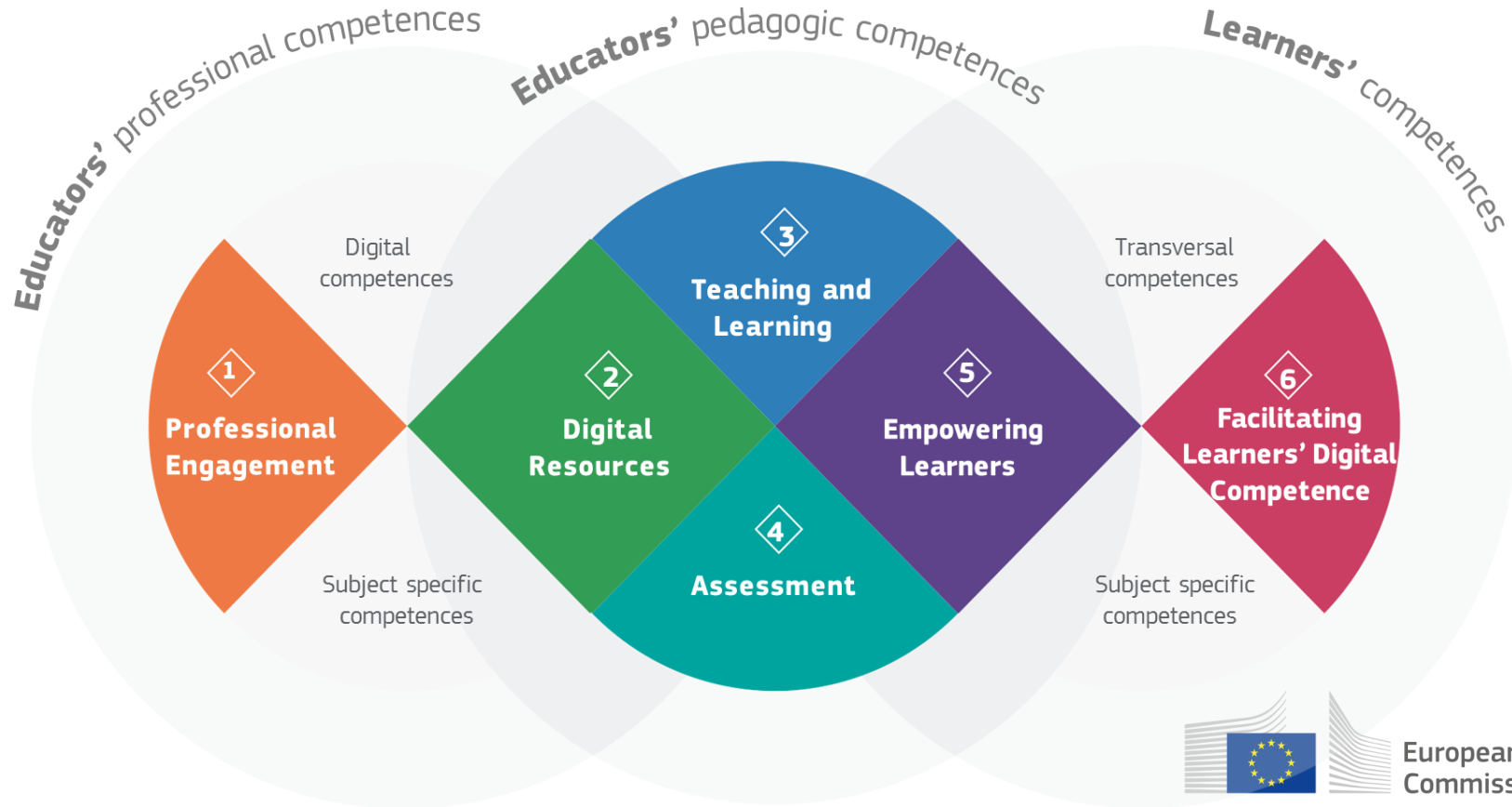
<https://bit.ly/2zUYAla>



More about the Project:  
<https://ec.europa.eu/jrc/en/digcompedu>



# In a nutshell



# DigCompEdu explained

## Educators' professional competences

### 1 PROFESSIONAL ENGAGEMENT

- 1.1 Organisational communication
- 1.2 Professional collaboration
- 1.3 Reflective practice
- 1.4 Digital CPD

## Educators' pedagogic competences

### 2 DIGITAL RESOURCES

- 2.1 Selecting
- 2.2 Creating & modifying
- 2.3 Managing, protecting, sharing

### 4 ASSESSMENT

- 4.1 Assessment strategies
- 4.2 Analysing evidence
- 4.3 Feedback & planning

### 3 TEACHING AND LEARNING

- 3.1 Teaching
- 3.2 Guidance
- 3.3 Collaborative learning
- 3.4 Self-regulated learning

### 5 EMPOWERING LEARNERS

- 5.1 Accessibility & inclusion
- 5.2 Differentiation & personalisation
- 5.3 Actively engaging learners

## Learners digital competences

### 6 FACILITATING LEARNERS' DIGITAL COMPETENCE

- 6.1 Information & media literacy
- 6.2 Communication
- 6.3 Content creation
- 6.4 Responsible use
- 6.5 Problem solving



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# The pedagogic core

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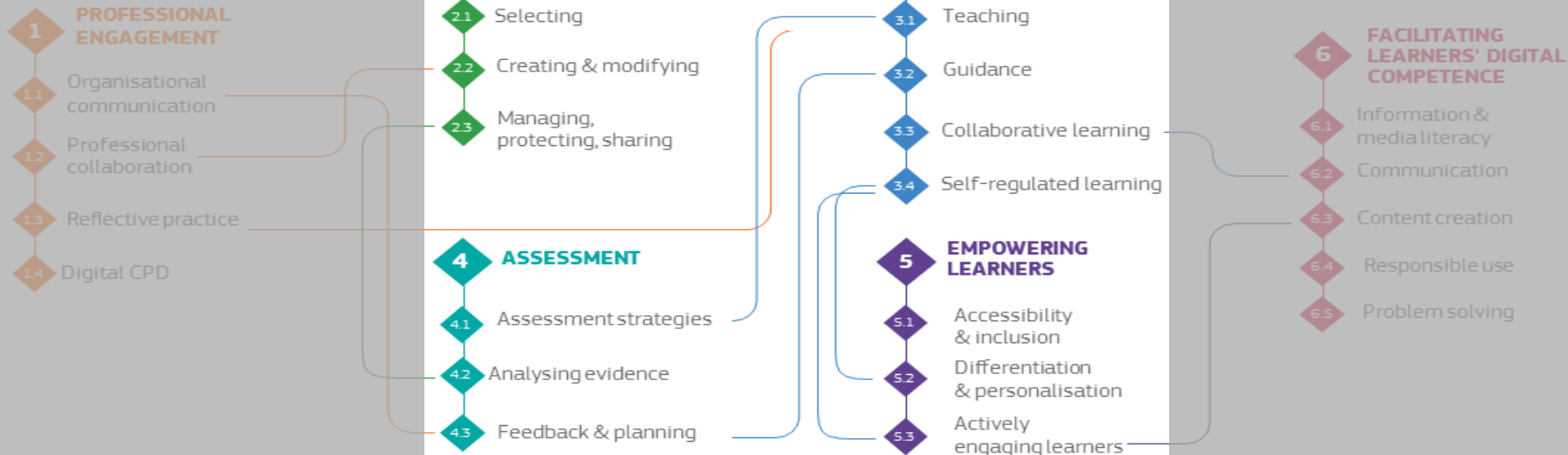
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# Core Competences for Teaching in the Digital Age

In a traditional classroom,  
**3.1 Teaching**  
is the most important  
competence for educators

## 3 TEACHING AND LEARNING

### 3.1 Teaching



Teaching

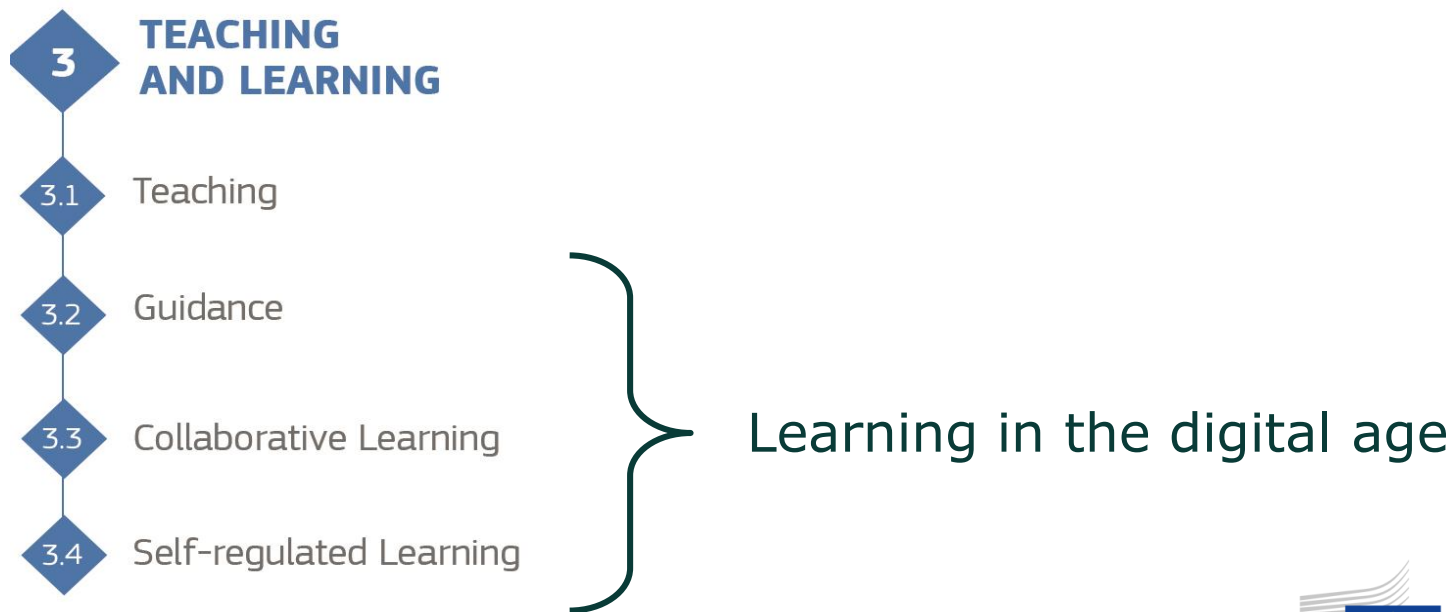
To plan for and **implement digital devices and resources** into the teaching process, so as to enhance the **effectiveness** of teaching interventions. To appropriately **manage** and **orchestrate** digital teaching interventions. To **experiment** with and develop new formats and pedagogical methods for instruction.



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# Learning in the digital age

The **transformative potential** of digital technologies is seized if **new forms of learning** are embraced



# The two pillars of learning in the digital age



Collaborative learning

To use digital technologies to **foster and enhance learner collaboration**. To enable learners to use digital technologies as part of collaborative assignments, as a means of enhancing communication, collaboration and collaborative knowledge creation.



Self-regulated learning

To use digital technologies to support learners' **self-regulated learning**. To enable learners to plan, monitor and reflect on their own learning, provide evidence of progress, share insights and come up with creative solutions.

# Consequences

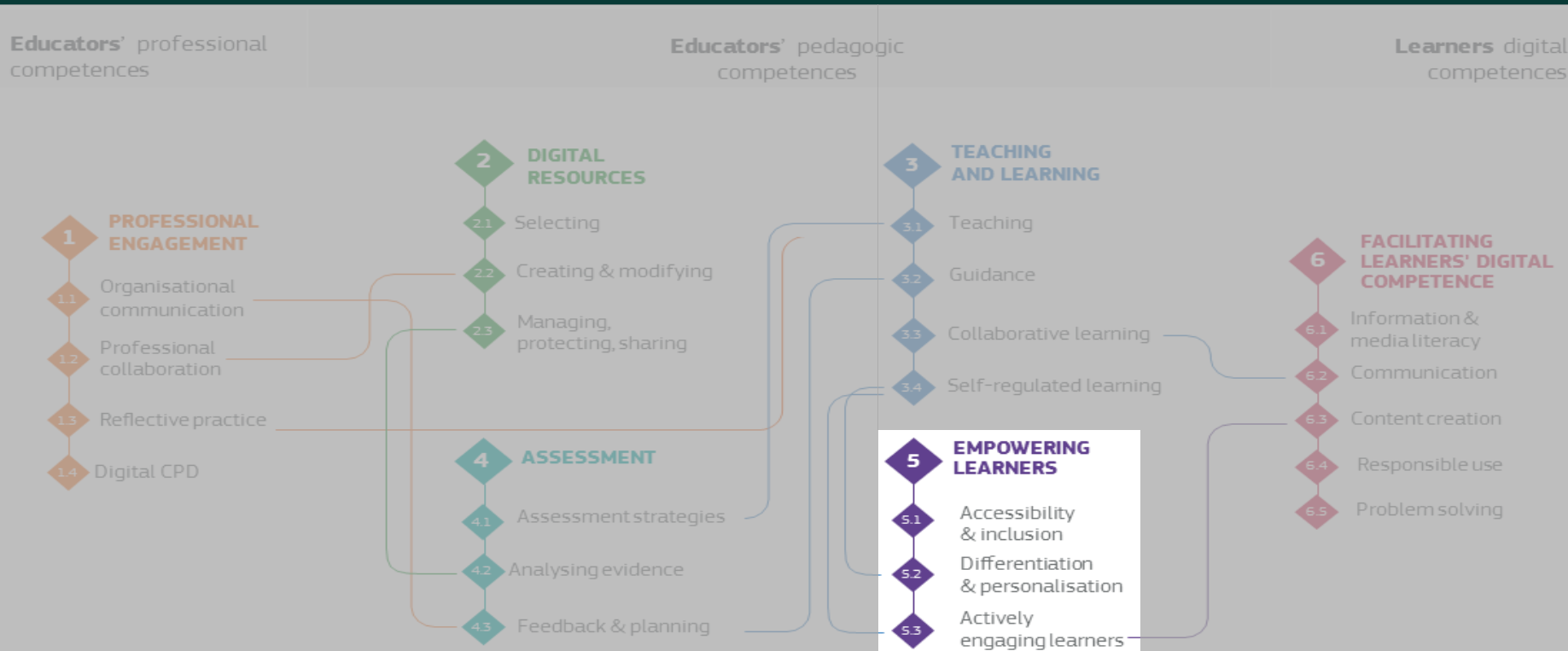
If student collaboration and self-regulated learning become the norm, **new forms of providing guidance and support** are needed.



To use digital technologies and services to enhance the interaction with learners, individually and collectively, within and outside the learning session. To use digital technologies to offer **timely** and **targeted guidance** and **assistance**.



# Opportunities & Challenges



Digital age learning puts the learner at the centre

# Opportunities

5

## EMPOWERING LEARNERS

5.2

Differentiation  
& personalisation



To use digital technologies to **address learners' diverse learning needs**, by allowing learners to advance at different levels and speeds, and to follow individual learning pathways and objectives.

# Opportunities

5

## EMPOWERING LEARNERS

5.3

Actively  
engaging learners



To use digital technologies to foster **learners' active and creative engagement** with a subject matter. To use digital technologies within pedagogic strategies that foster learners' **transversal skills, deep thinking** and **creative expression**. To open up learning to new, real-world contexts, which involve learners themselves in hands-on activities, scientific investigation or complex problem solving, or in other ways increase learners' active involvement in complex subject matters.



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# Challenges

## 5 EMPOWERING LEARNERS

### 5.1 Accessibility & inclusion



To **ensure accessibility** to learning resources and activities, for all learners, including those with special needs. To consider and respond to learners' (digital) expectations, abilities, uses and misconceptions, as well as contextual, physical or cognitive constraints to their use of digital technologies.

# Widening the scope

## A holistic view on educators' digital competence

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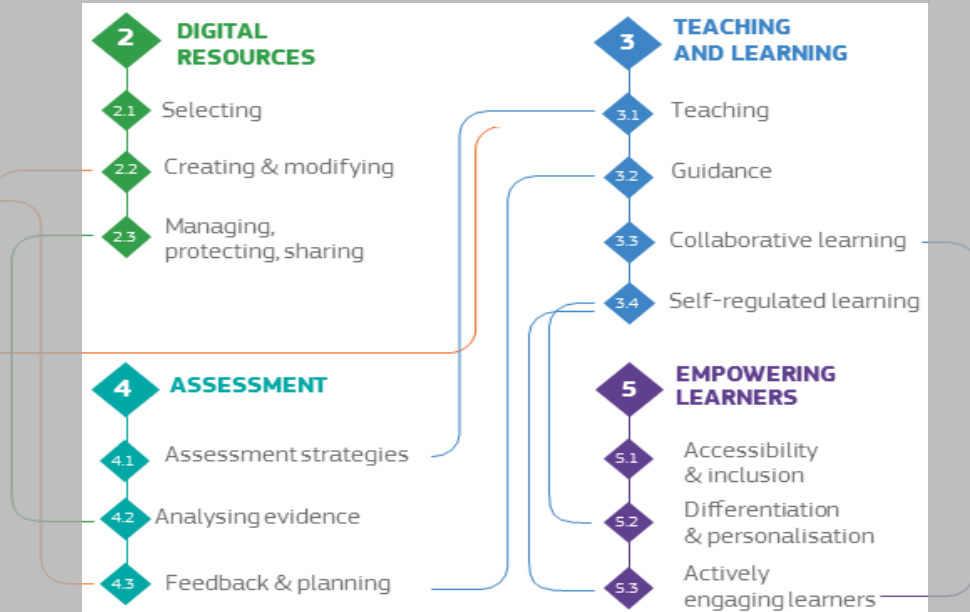
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# Digital Resources

Finding, creating and sharing resources that are tailored to the learning context and individual learners' needs



Selecting digital resources



Managing, protecting and sharing digital resources



Creating and modifying digital resources

# Assessment

Innovatively using the power of digital strategies for enhancing assessment and feedback



Analysing evidence

## 4 ASSESSMENT

4.1 Assessment strategies

4.2 Analysing evidence

4.3 Feedback & Planning



Feedback and Planning



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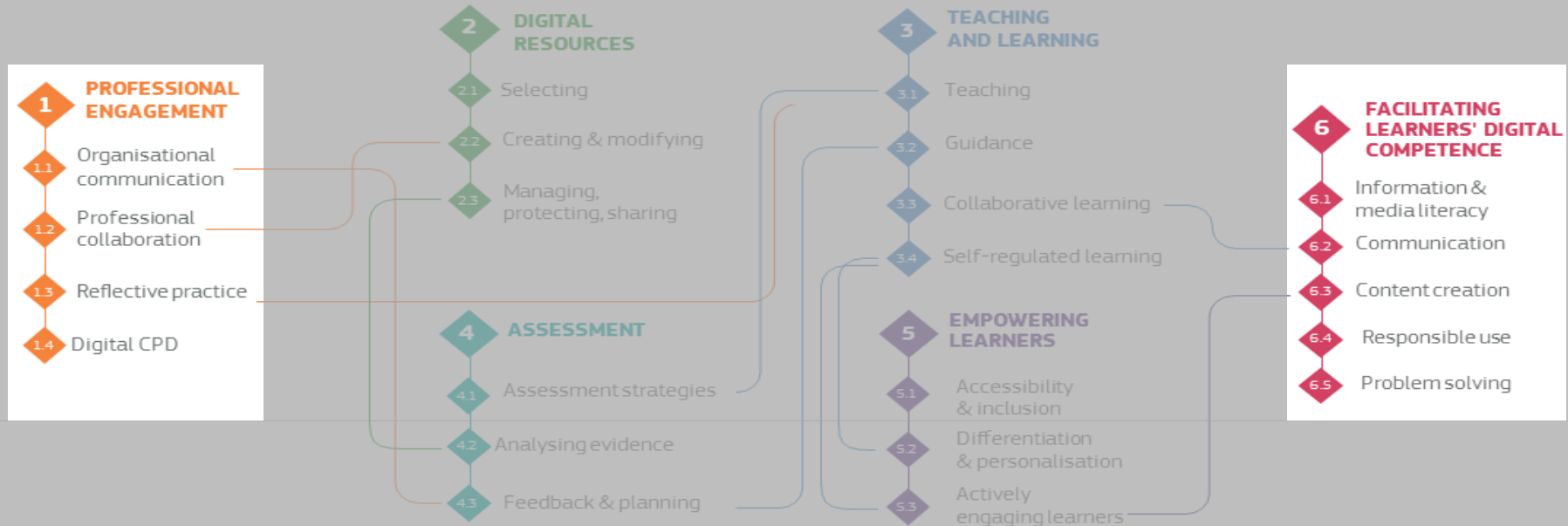
# Widening the scope further

## Life in the digital age

**Educators' professional competences**

**Educators' pedagogic competences**

**Learners digital competences**



# Professional engagement

Opening up communication and collaboration strategies,  
within and beyond the organisation

1

## PROFESSIONAL ENGAGEMENT

1.1

Organisational  
Communication

1.2

Professional  
Collaboration

1.3

Reflective Practice

1.4

Digital CPD



Reflective practice



Professional collaboration



Digital Continuous Professional  
Development (CPD)

Enhancing and developing pedagogical competences

# Facilitating Learners' Digital Competence



Information and media literacy



Digital communication & collaboration



Digital content creation



Responsible use



Digital problem solving

6

## FACILITATING LEARNERS' DIGITAL COMPETENCE

6.1

Information & media literacy

6.2

Communication

6.3

Content creation

6.4

Responsible use

6.5

Problem solving

Making learners fit for life in the digital age

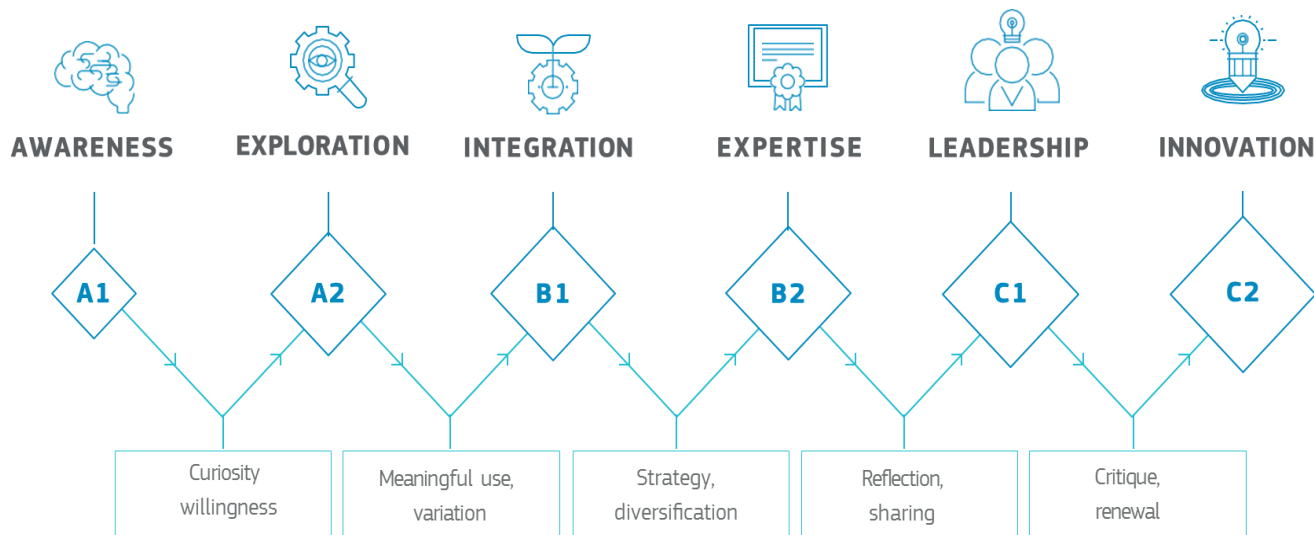


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# How can teachers develop their educator-specific digital competence?

# Competence Progression

- Educators' professional digital competence development is a continuous endeavour – no matter which stage they are at
- Different levels mean different focus areas and strategies for professional development



# Competence levels

## Newcomer (A1)



### **Newcomers (A1)**

Have not really started engaging with digital technologies for teaching and learning.

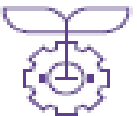
## Explorer (A2)



### **Explorers (A2)**

Already use digital technologies in some parts of their professional practice. However, they still need to develop a more comprehensive and consistent approach.

## Integrator (B1)



**Integrators (B1)** experiment with digital technologies in a variety of contexts and for a range of purposes, integrating them into many of their practices.

## Expert (B2)



### **Experts (B2)**

purposefully select digital technologies for particular situations, and try to understand the benefits and drawbacks of different digital strategies.

## Leader (C1)



**Leader (C1)** have a consistent and comprehensive approach to using digital technologies. They rely on a broad repertoire of digital strategies from which they choose the most appropriate for any given situation.

## Pioneer (C2)



**Pioneers (C2)** experiment with highly innovative and complex digital technologies and/or develop novel pedagogical approaches.

# DigCompEdu Check-In Tool

**An Online Survey-based tool for educators to self-assess and reflect**

- **3 versions**
  - Teachers in school education incl. VET;
  - Academics in higher education;
  - Lecturers in adult education
- **22 items** with 5 answer options
  - One item per DigCompEdu competence
  - Answer options arranged by level of engagement with digital technologies
- **Detailed Feedback**
  - Total score mapped on DigCompEdu competence levels
  - Detailed feedback on each item
  - Concrete advice

**Check it out:**

- For educators in school education:  
<https://ec.europa.eu/eusurvey/runner/DigCompEdu-S-EN>
- For educators in higher education:  
<https://ec.europa.eu/eusurvey/runner/DigCompEdu-H-EN>
- For educators in adult education:  
<https://ec.europa.eu/eusurvey/runner/DigCompEdu-A-EN>

**Work in Progress**

# Join our Community

European Commission > JRC Science Hub > Communities > DigCompEdu Community

Home About Us Research Knowledge Working With Us Procurement News & Events Our Communities

## DigCompEdu Community

Welcome, Christine REDECKER

Logout

- Home
- About
- Articles
- Events
- News
- Forum
- Useful links
- Polls
- Library
- Admin tools

Links

DigCompEdu check-in

Create content

Group managers/editors

Marcelino CABRERA GIRALDEZ

### DigCompEdu

The European Framework for the Digital Competence of Educators

#### Welcome to the DigCompEdu Community

This community aims to bring together people across Europe who are interested in using the European Framework for the Digital Competence of Educators (DigCompEdu).

The aim is to exchange ideas and experiences, to promote the development of educators' digital competence across Europe and to act as an expert network advising on the further development, adaptation and use of the framework and its associated self-assessment tools.

Join the DigCompEdu Community to:

- Form part of the European Commission Expert Network on DigCompEdu
- Connect with people who are also using DigCompEdu
- Learn how others use DigCompEdu and benefit from their experiences
- Make your DigCompEdu project known to others
- Share your DigCompEdu materials

NEWS

Calendar

Chat

Library

<https://ec.europa.eu/jrc/communities/community/digcompedu-community>







# Thanks

## Any questions?

You can find contact at [christine.redecker@ec.europa.eu](mailto:christine.redecker@ec.europa.eu)

<https://ec.europa.eu/jrc/digcompedu>