

# Skaitmenizavimo iššūkiai Europos švietimo kontekste

Prof. dr. Airina Volungevičienė



VYTAUTO  
DIDŽIOJO  
UNIVERSITETAS  
MCMXXII



## Digital education

The EU is promoting the development of a high-performing European digital education ecosystem and is seeking to enhance citizens' competences and skills for the digital transition.

[Learn about digital education](#)



## What is the EU doing on digital education?



### Digital Education Action Plan

The 2021-2027 Digital Education Action Plan is the Commission's flagship digital education policy initiative.

[Explore the Action Plan](#) →



### European Digital Education Hub

The open online collaborative community for digital education stakeholders in Europe and beyond.

[Join the community of the Hub](#) →



### Free self-reflection tools

Self-reflection tools on digital competences in education: SELFIE, SELFIE for TEACHERS and SELFIE for work-based learning.

[Learn about the self-reflection tools](#) →

## Working Groups

Learn more about the work of European Education Area Strategic Framework Working Groups on digital education.

[Discover the Working Groups](#)



Bruselis, 2020 09 30  
COM(2020) 624 final

KOMISIJOS KOMUNIKATAS EUROPOS PARLAMENTUI, TARYBAI, EUROPOS  
EKONOMIKOS IR SOCIALINIŲ REIKALŲ KOMITETUI IR REGIONŲ  
KOMITETUI

2021–2027 m. skaitmeninio švietimo veiksmų planas  
*Švietimo ir mokymo pritaikymas prie skaitmeninio amžiaus*

{SWD(2020) 209 final}

## Figure 2 – Priorities of the updated Digital Education Action Plan (2021-2027)

**PRIORITY 1** – Fostering the development of a  
high-performing digital education ecosystem



Launch a **strategic dialogue with member states** to facilitate successful digital education



Make recommendations for **online/distance learning** in primary and secondary education



Develop a **European Digital Education Content Framework** and check the feasibility of a **European exchange platform** to share certified online resources and link existing platforms



Launch a **Connectivity4Schools** initiative and encourage **member states'** uptake of EU support for broadband, internet access and digital tools such as **SELFIE for Teachers**



Develop **ethical guidelines on artificial intelligence (AI) and data usage** in teaching and learning

**PRIORITY 2** – Enhancing digital skills and  
competences for the digital transformation



Develop **common guidelines to foster digital literacy and fight disinformation**



Include AI and digital skills in **the European Digital Competence Framework**; support the development of **artificial intelligence learning resources** for education and training providers



Develop a **European Digital Skills Certificate** recognised by governments, employers and other stakeholders across Europe



Make recommendations **on improving digital skills provision** and introduce an **EU target for student digital competence**



Promote advanced digital skills development; scale up **Digital Opportunity traineeships** and encourage **female participation in science, technology, engineering and mathematics**



Create a new **European Digital Education Hub** to link national and regional digital education initiatives and stakeholders

# Join European Digital Education Hub

**Mentorship and Clinics**  
**Knowledge Building Activities**  
**Accelerator**  
**Reading Corner**

**... and much more!**





Search

Teams Join or create team

Knowledge Building Posts Files About & Wiki About and Wiki

GRP-EACEA-EXT-DigiEduHub

General  
Newsletter  
**T1 - Community of Practice**  
**T2 - Peer learning and mentoring**  
T3 - Information and data gathering  
T4 - Knowledge building and dissemin...  
T5 - Acceleration  
[See all channels](#)

GRP-European Digital Education ...

General  
2 - Hub News  
**3 - Sharing is caring**  
AI in Edu discussions  
Consortium and CA - HEIO  
[Knowledge Building](#)  
Mentoring and Online Clinics  
Squad 1 - Lessons from Covid-19  
[See all channels](#)

GRP-DELTA Working Group

General  
Digital education provisions for refugees  
Digital Inclusion  
Enabling Factors of Digital Education  
Erasmus(plus) 2022 Call

CG Carlos Madrid Gari (Guest) 01/09 11:14

## Knowledge Building Event

Join us on Tuesday September 12 for a new Knowledge Building Event on "Issuing Digital Micro-Credentials By Using European Standards and Services" at 14:00 (CET)

We are pleased to invite you to **Issuing Digital Micro-Credentials By Using European Standards** September 12 from 14:00 to 15:30 (CET) on the Knowledge Building Channel.

The aim of the event is to introduce the European Digital Credentials for Learning Infrastructure and Credentials that are compliant with Annex 1 of the Council Recommendation on a European approach for lifelong learning and employability. Starting from the policy context from which the European Lex explaining and demonstrating how education providers can use this EU standard and the EDC tools, to issue digital micro-credentials to anyone, at any stage of their lifelong learning journeys, but also institutions need to meet to make credential issuance smooth, efficient and beneficial.  
[see more](#)

**EDEH Agenda - KBA September 12.pdf**  
GRP-European Digital Education Hub > Kno...

4 replies from Koch, Leon (Guest), Ildiko Mazar (Guest), Benke-Aberg, Rasmus (Guest), and 1 other

Benke-Aberg, Rasmus (Guest) 27/09 18:44  
Hello [Juns Riekstins](#). Yes, the event was recorded and you can find it [here](#).

Ildiko Mazar (Guest) 09/10 16:50  
Hello [Benke-Aberg, Rasmus](#), I wanted to check something in the recording but it seem to have referenced on the 27th. Can you or somebody else please check if the issue is at my end? Thank you.

Koch, Leon (Guest) 09/10 16:58  
Hi [Ildiko](#), indeed, the link has changed. You can now find the recording [here](#).

### Why does Europe need a Learning Mode?

OBJECTIVES	BENEFITS
<ul style="list-style-type: none"> <li>Semantic Standards for Learning</li> <li>Standardised expression of verifiable knowledge &amp; skills</li> <li>Create an EU Skills Data Space</li> <li>Multilingual (available in 29 languages)</li> <li>Remove barriers to recognition, supporting "free movement"</li> <li>Provide accreditation &amp; transparency tools</li> <li>Reduce market fragmentation</li> </ul>	<ul style="list-style-type: none"> <li>Captures formal, non-formal &amp; informal learning</li> <li>... across all levels of education and training</li> <li>... from the whole course lifecycle to the whole course lifecycle</li> <li>... with interoperable credentials</li> <li>Aligned with European transparency and recognition tools</li> <li>Free &amp; open source</li> </ul>

## What can I find on the European Digital Education Hub?

**Information and knowledge-building**

The Hub offers peer learning opportunities and access to high-quality resources to support digital education practitioners.

[Explore information and knowledge-building](#)

**Community of practice**

Meet the online community of digital education practitioners and stakeholders in Europe.

[Get to know the community](#)

**Acceleration of best practices**

The Hub supports the development and upscaling of innovative solutions.

[Find out more](#)

**Teachers as Researchers weeks**

Enhancing knowledge sharing and knowledge building between European digital educators.

[Upcoming weeks](#)

## European Digital Education Hub news



Meet the team behind My First Calendar, an interactive calendar assisting in language



Insights from the workshop on digital skills



"Ask Me Anything" session about digital education in prisons

<https://education.ec.europa.eu/focus-topics/digital-education>

# Introduction to the European Learning Model

The European Learning Model (ELM) is a multilingual data model providing a single vocabulary for the description of learning in Europe. Having a single model at European level promotes the free movement of workers and learners through comparability, portability and transparency of data.

## Agenda

Evidence-Based Approaches to Technology Use in Early Education

December 4, 2023 | 13:00-14:30 CET

- 13:00** **Introduction to the theme and the importance of evidence in researching, developing and implementing technologies in early education**  
**Natalia I. Kucirkova**, Professor in Early Childhood, University of Stavanger and The Open University
- 14:10** **Presentations and Panel Discussions**
- Christian Magnusson**, Senior Adm Officer Ministry of Education and Research, DELTA Group, Sweden, *Swedish government insights*
  - Sandra Mathers**, Senior Researcher at the University of Oxford, *Academia-industry partnerships in supporting digital reading*
  - Charles Mifsud**, Professor at the Centre for Literacy, Malta, *Researching the value of cutting-edge technologies through partnerships with educators*

## The uses of the ELM

By providing a unified way to refer to, and to describe all things related to learning, the ELM allows for the understanding of concepts in the same way across countries and organisations. This, in turn, eases the data exchange process across Europe as any organisation or entity working with learning can make use of the same concepts, making the data understandable even across languages. For instance, when providing information about a learning opportunity (such as a university degree programme or a short online course), this information can be presented in a way that is understood across all EU Member States. This way, a potential employer in another country can also discern exactly what a person has learned and achieved through a particular opportunity. The ELM has a multitude of uses, below is a list of the most common ones:

- Course provider or Educational/Training**  
Using the ELM to describe your courses will help audience and make your courses easier to find.
- National Authority**  
Transferring your national accreditation or quality format makes your data accessible and transparent.
- Lifelong Learners**  
Expressing and showcasing your skills using the ELM build a competitive skill profile, and help you find advance your career development.
- Credentialed Issuers**  
You can use the ELM to build data-rich multilingual frameworks that are verifiable and tamper-evident, and help digitalisation process.
- Employers**  
If you are looking for verifiable skill sets in applicants, supports the documentation of learning outcomes frameworks such as ESCO or DigComp.
- Learning Management System or Student Information System provider**  
Using the ELM you can express the course and in your system in a technical format fully understood across and beyond the EU.

### European Education Area

Quality education and training for all

Home | About EEA ▾ | Focus topics ▾ | Education levels ▲ | What's new? ▾ | Resources and tools ▾ | Funding ▾

<p><b>About education levels</b></p> <p>National education systems are arranged in five main levels.</p>	<p><b>Early childhood education and care</b></p> <p>Education and care for children from birth to compulsory school age.</p>	<p><b>School education</b></p> <p>Supporting the development of quality national school education systems.</p>	<p><b>Higher education</b></p> <p>Accelerating the transformation of an open and inclusive European higher education system.</p>
<p><b>Vocational education and training</b></p> <p>Provides learners with skills for personal development and active citizenship.</p>	<p><b>Adult learning</b></p> <p>A vital component of the EU's lifelong learning policy.</p>		



## Teachers' competences

Briefing report No. 1  
by the European Digital Education Hub's squad on artificial intelligence in education

EUROPEAN  
DIGITAL  
EDUCATION  
HUB



## How to Support Teachers to Use AI in Teaching

Briefing report No. 2  
by the European Digital Education Hub's squad on artificial intelligence in education

EUROPEAN  
DIGITAL  
EDUCATION  
HUB



## Teaching with AI – Assessment, Feedback and Personalisation

Briefing report No. 7  
by the European Digital Education Hub's squad on artificial intelligence in education

EUROPEAN  
DIGITAL  
EDUCATION  
HUB

*Teaching for AI* entails competences for all citizens, including teachers and learners, to engage confidently, critically and safely with AI systems to provide them with the necessary knowledge, skills and attitudes to live in a world surrounded and shaped by AI.

*Teaching with AI* focuses on how AI systems can be used for educational goals, including using pedagogical judgement on when to use them, but also knowledge about the functioning of underlying algorithms, pedagogical models and data.

*Teaching about AI* is the more technical part, focused on training students in the fundamentals of AI. It is usually part of AI literacy which should comprise both the technological and the human dimensions of AI organised according to the student's age. Knowledge about AI basics is key for preparing students for the labour market, independently of their future careers.



## Use Scenarios & Practical Examples of AI Use in Education

Briefing report No. 3  
by the European Digital Education Hub's squad on artificial intelligence in education

EUROPEAN  
DIGITAL  
EDUCATION  
HUB



## Competences for teaching *with* AI

Area 1: Professional Engagement

Area 2: Digital resources

Area 3: Teaching and Learning

Area 4: Assessment

Area 5: Empowering Learners

Area 6: Facilitating learners' digital

6



Competence areas in DigComp

## Competences for teaching *for* AI

1. Information and data literacy

2. Communication and collaboration

3. Digital content creation

4. Safety

5. Problem solving

## Competences for teaching *about* AI

### Basic digital skills

- Content creation
- Cloud usage
- Data analysis and representation
- Collaboration and communication tools

### Computational thinking

- Design thinking
- Problem-solving
- Block-based programming
- Text-based programming

### Mathematics

- Fundamentals of statistics
- Fundamentals of probability

### Existing applications of AI

- To provide a realistic view of AI
- To be updated on the real usage of AI
- Ethics behind real cases
- Legal issues and data privacy

### Specific AI topics

- Perception and actuation
- Representation and reasoning
- Machine learning
- Collective intelligence



# Register of Commission Expert Groups and Other Similar Entities

Home **Expert Groups** Meetings Members Calls for application News

Register of Commission Expert Groups > Expert Groups > Details

GROUP | E03787

## Working Group on Digital Education: Learning, Teaching and Assessment (DELTA) (E03787)

ACTIVE

Subscribe to this group

Print as PDF

Details Additional Information Meetings Subgroups Members Statistics

### Abbreviation

DELTA

### Lead DG

▶ EAC - DG Education and Culture

### Type

▶ Informal  
▶ Temporary

### Mission

The overall objective of the Working Groups is to promote mutual learning on policy reform of national education systems with a view to effectively contributing to the achievement of the European Education Area by 2025, and as relevant, the Digital Education Action Plan (2021-2027) through tangible outputs. the outputs of the Working Groups should help implement European cooperation in education and training in an inclusive, holistic and lifelong learning perspective, especially through i) promoting mutual learning on policy reform of national education and training systems ii) contributing, through expert work, to the implementation of the relevant initiatives iii) reinforcing synergies between education and training and other EU policies and funding

### Terms of reference

[Terms of reference](#)

### Publication on the register of expert groups

03 August 2021

### Contact

EAC-WG-DELTA@ec.europa.eu

### Policy Area

▶ Education

### Associated DG

-

### Scope

▶ Limited

### Task

▶ Assist the Commission in the preparation of legislative proposals and policy initiatives  
▶ Coordinate with Member States, exchange of views

### Link to Website

-

### Last updated

23 May 2023

## European Education Area

Quality education and training for all

Home About EEA Focus topics Education levels What's new? Resources and tools Funding

You are here: [European Education Area](#) / [Focus topics](#) / [Digital education](#) / [Tools for schools and educators](#)

### Digital education: free self-reflection tools

The self-reflection tools on digital competences in Education SELFIE (including WBL module) and SELFIE for TEACHERS are run by the European commission and available for free in all EU official languages.

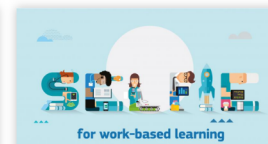
## Free tools for schools and teachers



### SELFIE

How can your school improve how it uses technology for teaching and learning?

[Use the SELFIE tool to find out](#) →



### SELFIE for work-based learning

Are you working in a Vocational Education and Training (VET) institution and/or training company?

[Use SELFIE for work based learning](#) →



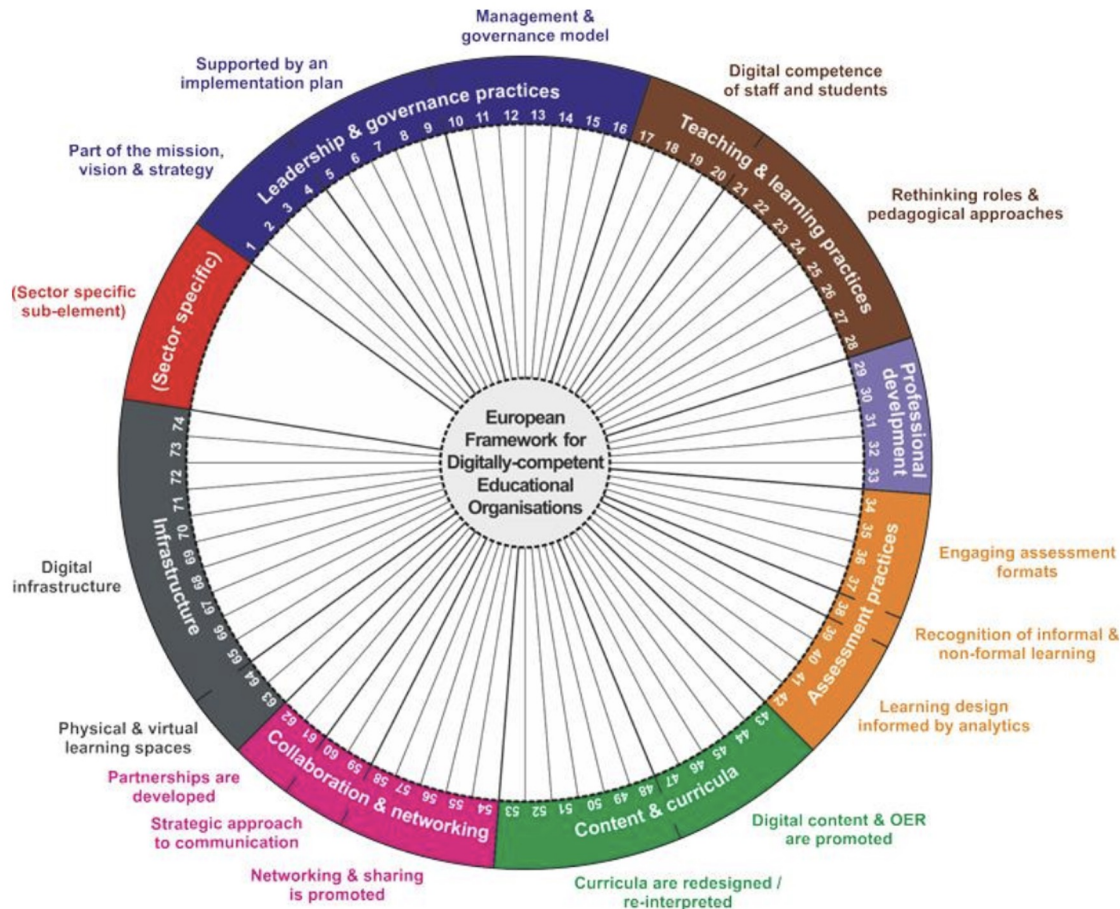
### SELFIE for TEACHERS

Are you a teacher? Learn more about and further develop your digital competence.

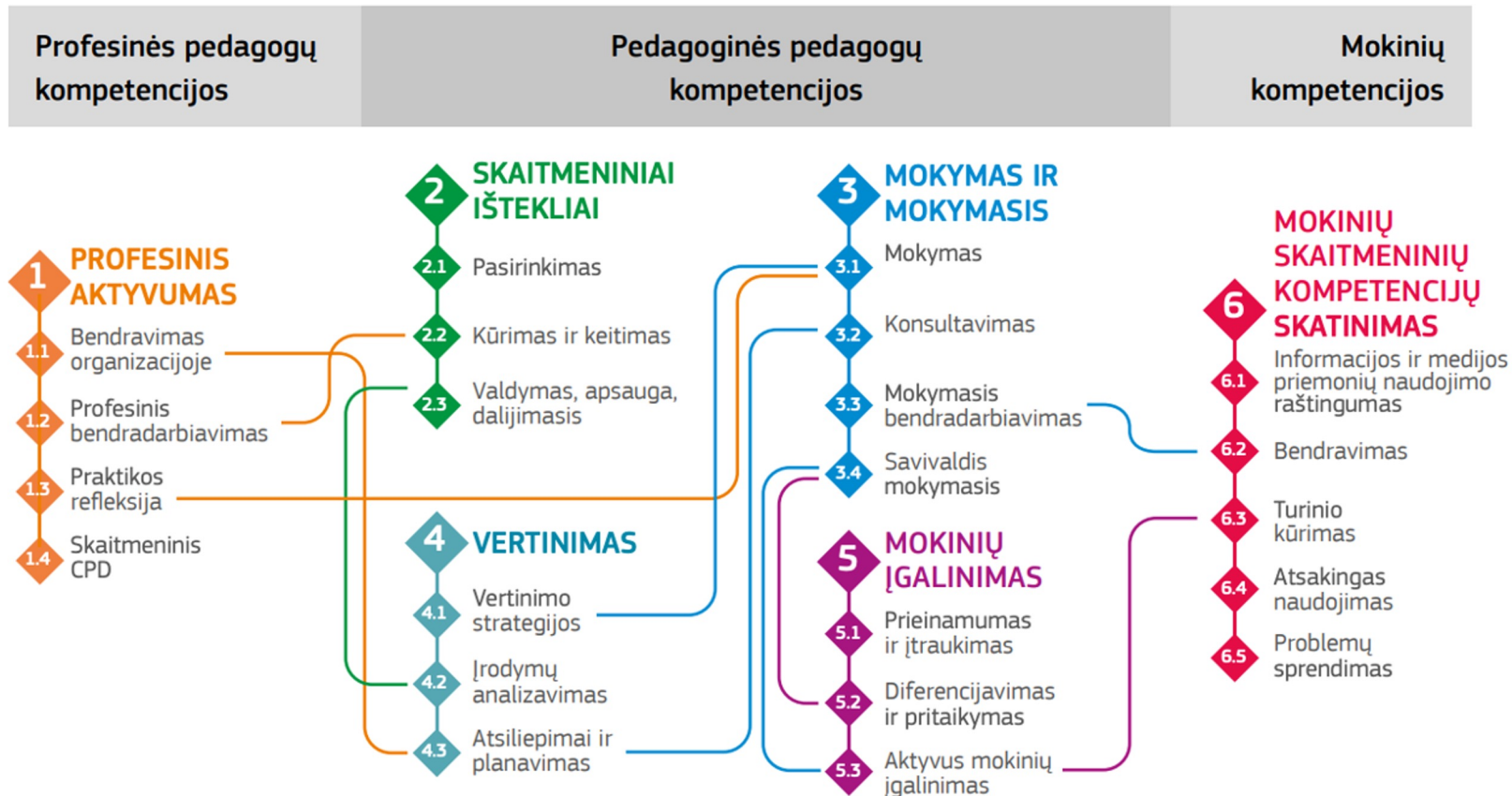
[Use SELFIE for TEACHERS](#) →

# DigCompOrg modelis 2016

1. Lyderystės ir valdymo praktika
2. Mokymo ir mokymosi praktika
3. Profesinis tobulėjimas/ raida
4. Vertinimo praktika
5. Skaitmeninis ugdymo turinys
6. Bendradarbiavimas ir tinklaveika
7. Infrastruktūra
8. Sektoriui specifinės sritys



# DigCompEdu modelis (Redecker, 2017)



# Digital Competence: Empowering teachers and students

## Teachers' digital competence framework

The Estonian teachers' digital competence framework is adapted from DigCompEdu 2019 and it has six dimensions:

### 1. professional development and engagement



### 2. digital resources



### 3. teaching and learning



### 4. assessment



### 5. empowering learners



### 6. facilitating learners' digital competence



## Students' digital competence framework

The students' digital competence framework is adapted from DigComp 2.1 and it has five dimensions:

1. **information and data literacy** (e.g. articulating needs, judging the relevance of sources, organising digital data);
2. **communication and collaboration**;
3. **digital content creation** (e.g. creating, improving and editing, understanding copyright, giving understandable instructions to computer systems);
4. **safety**;
5. **problem-solving**.

[www.educationestonia.org/innovation/digital-competence/](http://www.educationestonia.org/innovation/digital-competence/)





Europos  
Komisija



**DIRBTINIO INTELEKTO (DI)  
IR DUOMENŲ NAUDOJIMO  
MOKYMO IR MOKYMOSI SRITYJE  
ETIKOS GAIRĖS PEDAGOGAMS**



Europos  
Komisija



**Kovos su dezinformacija ir  
skaitmeninio raštingumo skatinimo  
per švietimą ir mokymą gairės  
mokytojams ir ugdytojams**

Special report

## EU support for the digitalisation of schools

Significant investments, but a lack of strategic focus in the use of EU financing by member states



EUROPEAN COURT OF AUDITORS

Figure 2 – Priorities of the updated Digital Education Action Plan (2021-2027)

### PRIORITY 1 – Fostering the development of a high-performing digital education ecosystem



Launch a **strategic dialogue with member states** to facilitate successful digital education



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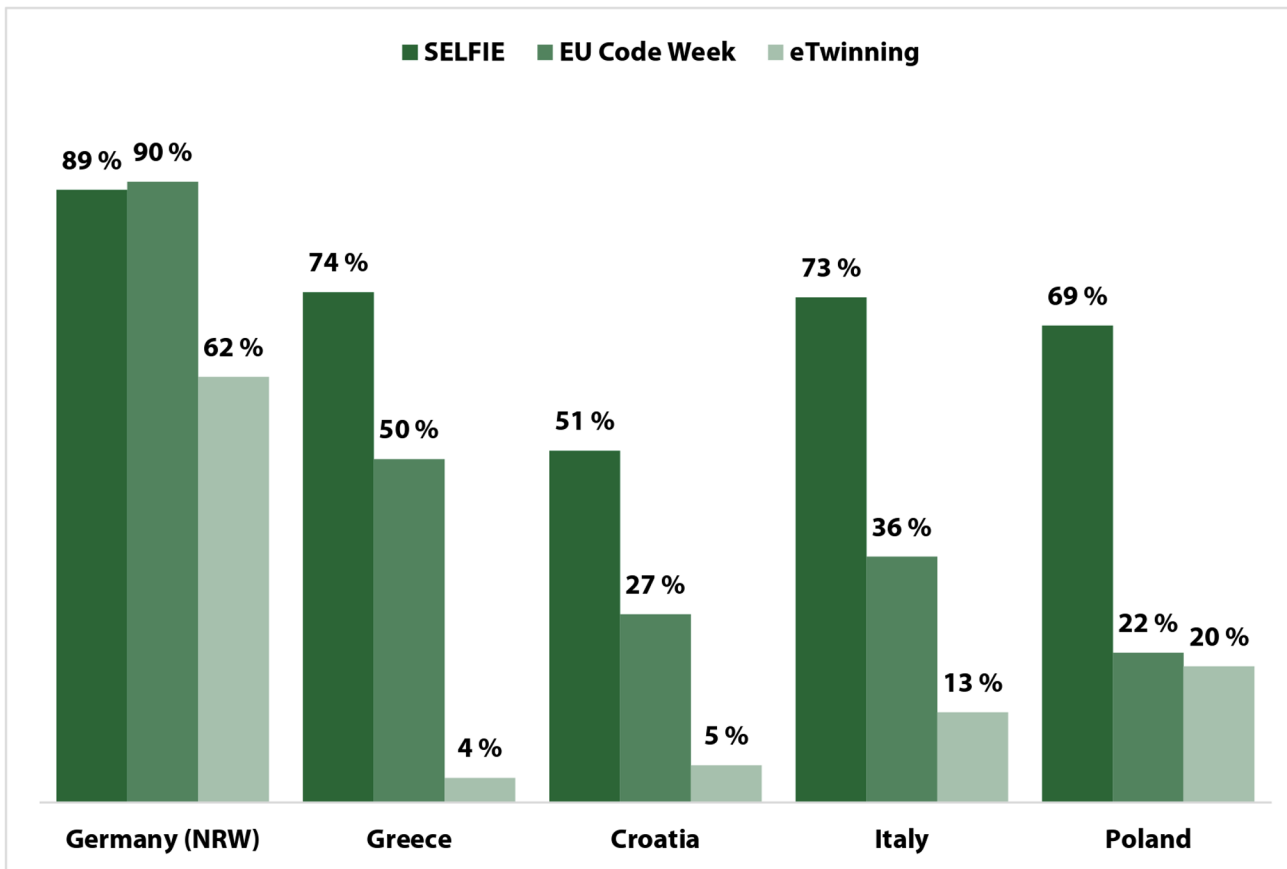


Promote advanced digital skills development; scale up **Digital Opportunity traineeships** and encourage **female participation in science, technology, engineering and mathematics**



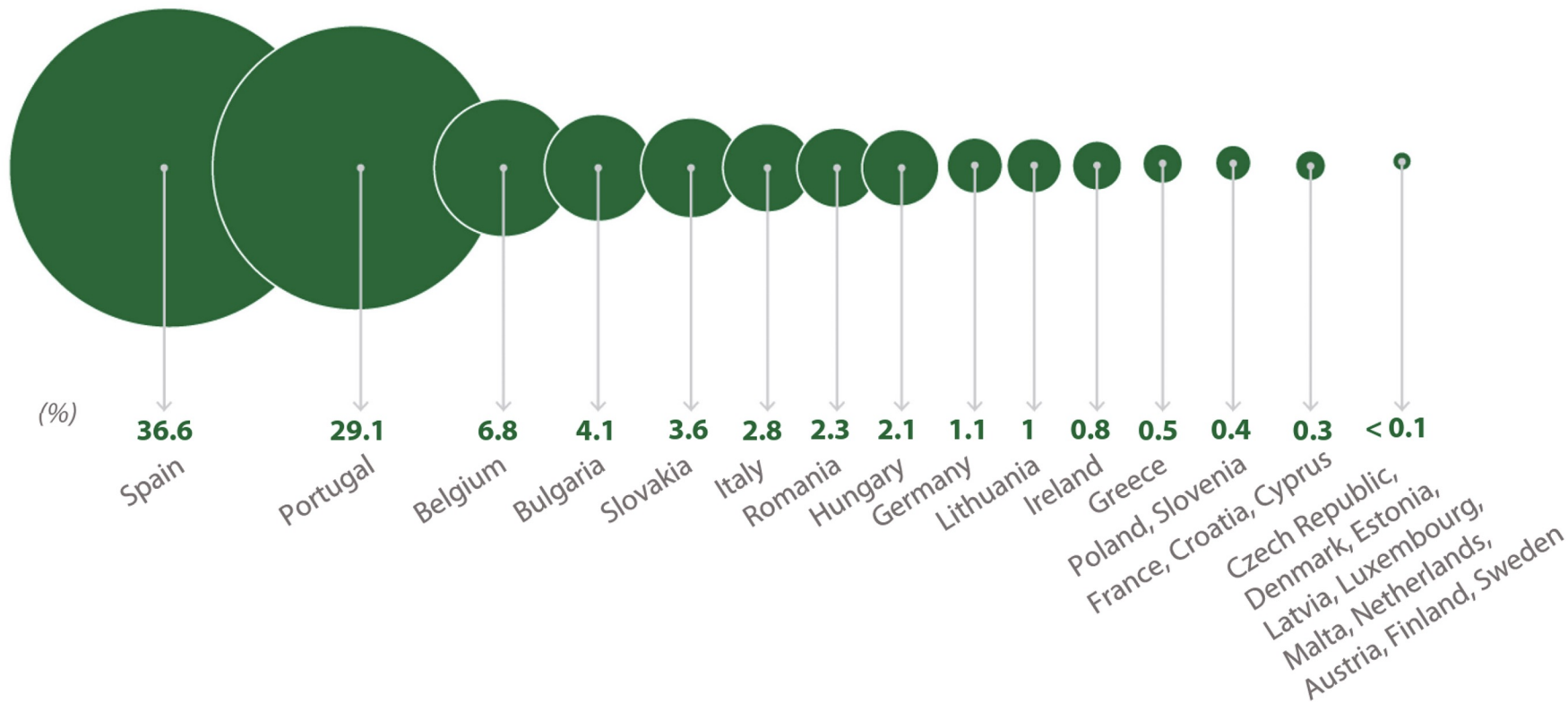
Create a new **European Digital Education Hub** to link national and regional digital education initiatives and stakeholders

Figure 5 – Share of surveyed schools not aware of selected Commission actions supporting the digitalisation of schools



Source: ECA survey.

# Figure 6 – Share of students and teachers using SELFIE in member states



Source: ECA based on Commission and Eurostat data.

# Skaitmeninės transformacijos klausimai

- Šalyse narėse mokytojai prašo uždrausti mobiliuosius įrenginius, netgi maksimaliai trumpinti laiką prie skaitmeninio ekrano - ar tai yra išeitis?
- Kokių pagrindų skaitmeninė transformacija planuojama ir vykdoma? Kokias problemas ji spręš? Ar jos interesas yra technologijų plėtra ar švietimo tikslai?
- Kurie “tradiciniai” švietimo elementai neturėtų būti transformuoti?
- Ar mes turime pakankamai patirties spręsti ar ir kokia apimtimi mes norime naudoti DI/ AI?

Koks yra švietimo skaitmeninės transformacijos tikslas?

Koks/ kokie yra sėkmingo ir kokybiško mokymo ir mokymosi rodikliai?

Fundamentaliosios  
(ekspertinės) žinios

Kontekstualiosios  
(perkeliamos) žinios

*Artificial Intelligence in Education*

27



Two ways of reaching the goal of K–12 education: the traditional method, which assumes that transfer can only be a result of expertise (curved line) and the proposed method (wavy line) that alternates between gaining transfer and expertise. *Source: CCR.*

Kaip mes “matuojame” įrankių, vadovėlių, metodų poveikį žinių įgijimui ir išsaugojimui švietimo prasmės perspektyvoje?  
Ar vertiname **žinių** išsaugojimą? Ar puoselėjame fundamentaliąsias žinias?

WAYNE HOLMES, MAYA BIALIK, CHARLES FADEL

# ARTIFICIAL INTELLIGENCE IN EDUCATION

Promises and Implications for Teaching & Learning

“... a must read for educators and all stakeholders interested in how the future of education will be impacted—and more than likely transformed—by AI... provides a critical lens on both the potential benefits and risks of AI without hyping the technology.”

—Jim Flanagan, Chief Operating and Strategy Officer, ISTE



# The Unintended Consequences of Artificial Intelligence and Education

Wayne Holmes  
on behalf of Education International

October 2023



Education Internationale  
Internationale de l'Éducation  
Internacional de la Educación  
Bildungsinternationale



## 3. Disempowering teachers

*“Recent advances in AI are likely to spell the end of the traditional school classroom.... Human involvement would still be essential... but could be drastically different from the traditional role of a teacher, potentially incorporating ‘playground monitor’ responsibilities.”*  
(Stuart Russell, author of the leading AI textbook) <sup>13</sup>

Unfortunately, the narrative outlined by Stuart Russell is not new. It, and the claim that technology will save teachers time, were first made by the behaviourist B. F. Skinner almost a hundred years ago, and it has been endlessly repeated about educational technologies ever since, although it has never actually happened (although technology often does displace teacher activities). Now, with AI and AIED, we are told, things are different. AIED applications are better at teaching than teachers – albeit in very narrow domains, a subtlety lost on many policymakers – and will save teachers time... However, nothing is further from the truth.

Instead, despite no AIED system being as intelligent, skilled, nuanced or empathetic as a teacher, the arrival of AIED applications in classrooms is effectively disempowering teachers, reducing their role in the learning process. All too often, the teacher’s role is relegated to switching on the technology, maintaining behaviour and troubleshooting, while the AI-enabled system – or rather the commercial organisation behind the AI-enabled system – decides what the students should be learning, in what order and how. In short, AIED can mean teachers being expected to outsource some





Skaitmenizavimo  
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kontekste

Prof. dr. Airina Volungevičienė