

ETF POLICY BRIEFING

EVIDENCE, PRACTICE & ADVICE FOR POLICY MAKERS



THE POWER OF SELF-REFLECTION IN DIGITAL EDUCATION

Self-reflection to enhance quality and
inclusive digital education

Why reflecting on digital education

Today, teaching and learning are increasingly taking place with the support of digital technology, a trend driven by the COVID-19 pandemic but also by the never-ending quest to create new learning for ‘inclusive and equitable quality education and promote lifelong learning opportunities for all’. (SDG 4)¹

In 2023, the OECD published the report ‘Shaping Digital Education’, which highlights the potential of digital education to transform teaching and learning practices and enhance teachers’ ability to deliver high-quality and inclusive instruction².

For example, adaptive learning technologies based on artificial intelligence (AI) and learning analytics can be used as intelligent tutoring systems, enabling unprecedented personalisation of student learning.³

Many studies highlight the complexity of effectively integrating digital technologies in education, pointing to the digital capacity of education and training systems and schools, and the digital skills of teachers as key drivers².

Policymakers need to be aware of this complexity in order to achieve quality and inclusion in digital education. They need tools to:

- Navigate the many relevant and interrelated policy areas and options when designing and implementing digital education policies, such as the ETF’s Digital Education Reform Framework⁴
- Monitor and evaluate digital education reforms, using a range of approaches and datasets.

For quality and inclusive digital education, policymakers are called upon to create enabling conditions⁵, while schools and teachers are expected to find solutions tailored to specific contexts, needs and goals⁶.

This policy brief aims to introduce and explain self-reflection practices and examples of EU-related tools to support the development of quality and inclusive digital education, highlighting relevant ETF’s initiatives in partner countries.

What is digital education?

In line with the Digital Education Action Plan 2021-27 of the European Commission, **digital education** refers to both “the deployment of the vast and growing array of digital technologies (apps, platforms, software) to improve and extend education and training” and “the need to equip all learners with digital competences (knowledge, skills and attitudes) to live, work, learn and thrive in a world increasingly mediated by digital technologies”.

Quality and inclusive digital education includes aspects such as relevance (e.g., accuracy and appropriateness), engagement (e.g., accessibility of content and services) and technology (e.g., reliability and sustainability).

[Digital Education Action Plan \(2021-2027\) | European Education Area \(europa.eu\)](#)

¹ [Goal 4 | Department of Economic and Social Affairs \(un.org\)](#)

² [Shaping Digital Education: Enabling Factors for Quality, Equity and Efficiency | EN | OECD](#)

³ [OECD Digital Education Outlook 2021 | EN | OECD](#)

⁴ [The ETF’s Digital Education Reform Framework | Open Space \(europa.eu\)](#)

⁵ [Enabling digital education and providing digital skills \(europa.eu\)](#)

⁶ [ACAD: Activity-Centred Analysis and Design – Peter Goodyear](#)

Self-reflection for quality improvement

Self-reflection is essential for quality and inclusive digital education. It is the cognitive ability to critically observe and evaluate one's own actions, skills and behaviours, and to grow in a particular context and direction thereby increasing self-awareness. It is a concept with deep roots in psychology and cognitive science, with William James⁷ (11 January 1842 – 26 August 1910) as one of its main initiators and experts with his '*theory of self*', which distinguishes between 'I' and 'me' in the context of consciousness, where 'me' corresponds to the self *as an object* of experience, and 'I' reflects the self *as a subject* of experience⁸.

Self-reflection is often seen as a process of looking in a mirror and describing what you see⁹. It is about questioning, in a positive yet objective way, what you are doing, why you are doing it and for what reason, leading to greater self-awareness. The latter might be followed by decisions about whether there is a better, more efficient or more effective way of doing something.

Self-reflection is at the heart of self-assessment, a process of evaluating strengths, improvements and insights against a set of criteria and standards¹⁰. Self-assessment can be an individual or a collective exercise. The latter can take place on an individual basis, followed by a group discussion to prioritise challenges and related changes for better performance.

Questionnaires¹¹ are normally used to guide individuals through the self-assessment process. In order to collect complete, accurate and relevant data, a self-reflection questionnaire should be:

- Based on a holistic conceptual framework with sound scientific basis that includes a set of descriptors, standards and levels of proficiency.
- Adaptable to specific contexts and user groups, e.g., for students, including both open and closed questions.
- Anonymous to create the conditions for a sense of psychological safety and prevent bias in addressing our own weaknesses, challenges and areas for improvement without fear of judgement, thus promoting objectivity.

Self-reflection for quality and inclusive digital education

To fully realise the potential of digital education, it is essential to gain a deeper understanding of the real needs and attitudes of school leaders, teachers, and students. While digital education generates a significant amount of data, policymakers and policy shapers often have limited access to meaningful data needed to effectively monitor digital education. The use of anonymised, aggregated data generated by self-assessment systems could offer the following benefits:

- Provide insights from school systems on the integration of digital technologies in education and training.
- Encourage engagement and ownership by school stakeholders for context-specific solutions.

⁷ <https://iep.utm.edu/james-o/>

⁸ <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.01656/full>

⁹ [Self-reflection | The Open University & UNISON in Partnership](#)

¹⁰ [reflection.pdf \(ijpe.online\)](#)

¹¹ Example of [self-assessment questionnaire](#)

Enhancing the digital capacity of schools — the SELFIE tool

A school's digital capability is at the heart of quality and inclusive digital education. Often referred to as digital maturity or digital readiness, it is broadly defined as 'the extent to which culture, policies, infrastructure as well as digital competence of students and staff support the effective integration of technology in teaching and learning practices'¹².

In 2015, the European Commission, with the involvement of ETF experts, developed a possible reference framework for assessing the digital capacity of schools.¹³

In 2018, the Commission launched the corresponding self-reflection tool SELFIE, a free multilingual online tool designed to help schools self-assess and regularly review their digital capacity, with the involvement of school leaders, teachers, and students¹⁴.

By 2023, SELFIE had attracted more than 5 million users worldwide, in 40 languages and 80 countries, including significant uptake in ETF's partner countries, especially European Neighbourhood countries.

SELFIE into action in the ETF partner countries

- Since 2015, the ETF has been actively involved in supporting the development and validation of the SELFIE ecosystem, including an ad hoc version of SELFIE for apprenticeship systems (SELFIE WBL).
- Since its official launch in October 2018, the ETF has actively promoted and supported the implementation of SELFIE in partner countries.

Why SELFIE for digital education policies

SELFIE can assist policymakers in:

- Designing evidence-based effective schools' digital capacity policy initiatives.
- Facilitating peer learning and collaboration among schools on digital education¹⁵.
- Monitoring digital capacity using the SELFIE's anonymized aggregated data.

ISATCOVE: Europe's International Self-assessment Tool for Centres of Vocational Excellence

Building on the experience of SELFIE and other educational quality frameworks and self-assessment tools for VET, the ETF has been developing a digital self-assessment tool for VET providers with the status of Centres of Vocational Excellence (CoVEs).

The ISATCOVE criteria and indicators communicate what has been achieved by various VET providers in different countries at different times, to show how particular practices can be read in terms of a spectrum of developments and thus VET provision.

Providers will have an atlas that enables them to discover and chart their own paths to excellence. ISATCOVE incorporates the results of SELFIE and other information arising from specialist self-assessment exercises.

[Self-assessment for centres of vocational excellence | ETF \(europa.eu\)](#)

¹²

<https://www.sciencedirect.com/science/article/pii/S0360131520302785>

¹³ [Capturing schools' digital capacity: Psychometric analyses of the SELFIE self-reflection tool - ScienceDirect](#)

¹⁴ [SELFIE | European Education Area \(europa.eu\)](#)

¹⁵ [MenSI - Mentoring for School Improvement \(eun.org\)](#)

Improving teachers' digital competence — the SELFIEforTeachers tool

Teachers' digital competences are essential to integrating digital technologies to achieve better quality and inclusivity in teaching and learning.

In 2017, the European Commission launched the DigCompEdu reference framework to conceptualise digital competences for teachers and trainers. It aims to unlock the potential of digital pedagogy to enhance and innovate education and training practices.¹⁶

In 2018, the Commission launched the corresponding self-assessment tool SELFIEforTeachers (SfT) intended for primary and secondary general and vocational teachers. It aims to support teaching professionals in developing their digital literacy in their practice.¹⁷

Through the use of SfT, teachers take on a central role in shaping their individual learning pathways and actively participating in the learning process through self-reflection and assessment.

DigCompEdu in action in ETF partner countries

In 2020, the ETF piloted a tool based on DigCompEdu to assess teachers' digital literacy in five ETF partner countries (AL, ME, RS, NM, MD) during the peak of the COVID-19 pandemic, providing representative data at national level on teachers' digital literacy needs.¹⁸

Why SfT for digital education policy

SfT can help policymakers in:

- Designing effective policies for initial and continuous professional development.
- Providing a shared vision and vocabulary of digital literacy for teachers, promoting exchange of good practices and peer learning on digital pedagogy
- Monitoring teachers' digital literacy using anonymised, aggregated data from the SfT.

SELFIEforTeachers in the Western Balkans

In line with the Digital Agenda for the Western Balkans, the ETF and the European Commission's Joint Research Centre (DG-JRC) have designed a regional multi-annual initiative to promote and implement the SfT tool in the Western Balkans.

Designed in 2023 and to be launched in 2024, the initiative aims to: (i) support policy making in the region by providing evidence for the system of continuous professional development of educators; and (ii) inform future EU policy support to the region. The initiative will be managed in partnership with DG EAC and will contribute to the implementation of the [European Year of Skills](#) in 2023-24.

¹⁶ [DigCompEdu \(europa.eu\)](#)

¹⁷ [SELFIEforTEACHERS | Home \(europa.eu\)](#)

¹⁸ [Pilot of Needs Analysis Tool for Digital Competences 2020 | Open Space \(europa.eu\)](#)

Using self-reflection to strengthen quality assurance in vocational education and training in the digital age — the EQAVET tool

What is a VET school self-assessment? Cedefop (2011) provides the following definition: 'Any process or methodology carried out by a VET provider under its own responsibility, to evaluate its performance'.

The European Quality Assurance Framework for VET recommends that VET systems should be subject to self-evaluation, internal and external review, and that 'relevant, regular and coherent data collection takes place in order to measure success and identify areas for improvement'. Similarly, VET providers should regularly undertake self-assessment/self-evaluation, including the digital readiness and environmental sustainability of VET institutions, and that self-assessment and self-evaluation should include the collection and use of data and appropriate and effective mechanisms for involving internal and external stakeholders.

In particular, the framework aims to support self-evaluation while measuring success and identifying areas for improvement, including the digital readiness of VET systems and institutions.

The effectiveness of self-assessment depends on several factors, such as the assessment standards, the level of involvement of the different actors in the assessment exercise, the use of the assessment to design improvement plans, and the extent to which

it is complemented by some form of external evaluation.

In many Balkan countries, such as Montenegro, the self-assessment is carried out by a team composed of the school management, representatives from the competent professional departments and a selected number of teachers, who plan and coordinate the process and draft the evaluation report. It is recommended that the report is published on the school website.

Self-assessment is often complemented by an external assessment conducted by the Ministry of Education or by a quality assurance agency. In Moldova, the National Agency for Quality Assurance in Education and Research (ANACEC) carries out an external quality assessment in VET on the basis of national reference standards, accreditation standards and a government-approved methodology.

When conducting a self-assessment, a school in Montenegro has to comply with several standards related to the teaching and learning, institutional management, assessment of learning, etc. However, none of these standards refers to digital tools to be used either by teachers/trainers or by the management of the institutions.

Conclusions

Digital education is a reality and, increasingly, an important part of education reform. Quality and inclusion in digital education are major concerns. They are complex and depend on a variety of interrelated factors. Below is a set of key messages that are relevant to the effective

implementation of digital education policy reform, including the use of self-reflection tools. They are based on the ETF's experience in supporting policy makers and practitioners in partner countries.

Why can self-reflection improve quality and inclusion in digital education?

- **Self-reflection is a powerful cognitive process for assessing and reviewing implementation practices and outcomes**, for example when assessing an online lesson and the related learning outcomes. It can promote change and positive attitudes in response to specific needs and contexts.
- **Self-reflection also promotes self-regulation, self-correction and ownership**. These are the key factors for implementing inclusive and high-quality digital education solutions in today's diverse and multifaced learning environment (classroom, metaverse, online, hybrid).
- **It also reveals our own limitations and mistakes**. It is a sensitive process that requires a safe environment to reduce bias.

How can EU self-reflection approaches support quality and inclusion in digital education?

- **The EU self-reflection tools and related digital education ecosystems are universal and technologically neutral**, enabling rather than prescribing digital education practices.
- **They provide a common vision and vocabulary**, supporting peer learning and knowledge sharing between schools and practitioners.
- **Their outcomes, such as anonymised aggregated data and analysis, can provide insights into the quality and inclusiveness of digital education**, at the level of individual schools and teachers, but also at a higher level.

How can policymakers strengthen the use of self-reflection in digital education?

- **Policymakers should clearly position self-reflection in the context of designing digital education reforms**. Due to the cross-sectoral nature of digital education policies, self-reflection could support the broader vision of the reform canvas, especially when deciding its scope and objectives.
- **They should ensure enabling conditions for the meaningful use of self-reflection systems that empower schools and teachers as successful agents of change**. Key elements include subsidiarity and autonomy for education providers and local governments.
- **It is important to make use of self-reflection data**, alongside traditional datasets to better monitor digital education policies, practices and investments.

Key References

- Caffyn, S. (1999), "Development of a continuous improvement self-assessment tool", *International Journal of Operations & Production Management*, Vol. 19 No. 11, pp. 1138-1153.
<https://doi.org/10.1108/01443579910291050>
- Dinis Mota Da Costa, P., Castaño Muñoz, J. and Kampylis, P., Capturing schools' digital capacity: psychometrics analyses of the SELFIE self-reflection tool, *COMPUTERS and EDUCATION*, ISSN 0360-1315, 162, 2021, p. 104080, JRC120518.
<https://doi.org/10.1016/j.compedu.2020.104080>
- Huber, S. G. (2013). Multiple Learning Approaches in the Professional Development of School Leaders – Theoretical Perspectives and Empirical Findings on Self-assessment and Feedback. *Educational Management Administration & Leadership*, 41(4), 527–540.
<https://doi.org/10.1177/1741143213485469>
- Manea, A. D., Stan, C., & Albulescu, I. (2023). Study on the Dimension of Teachers' Self-Assessment. In I. Albulescu, & C. Stan (Eds.), *Education, Reflection, Development - ERD 2022*, vol 6. *European Proceedings of Educational Sciences* (pp. 129-138). European Publisher.
<https://doi.org/10.15405/epes.23056.12>
- OECD (2019). *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris. <https://doi.org/10.1787/1d0bc92a-en>
- OECD (2021), *OECD Digital Education Outlook 2021: Pushing the Frontiers with Artificial Intelligence, Blockchain and Robots*, OECD Publishing, Paris, <https://doi.org/10.1787/589b283f-en>.
- OECD (2023), *Shaping Digital Education: Enabling Factors for Quality, Equity and Efficiency*, OECD Publishing, Paris, <https://doi.org/10.1787/bac4dc9f-en>.

Useful links

- Digital Education Action Plan (2021-2027) | European Education Area (europa.eu)
- The ETF Digital Education Reform Framework | Open Space (europa.eu)
- SELFIE | European Education Area (europa.eu)
- SELFIE for TEACHERS | European Education Area (europa.eu)
- EQAVET - European Quality Assurance in Vocational Education and Training - Employment, Social Affairs & Inclusion - European Commission (europa.eu)