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DATA AND GENERATIVE AI: RECONFIGURING THE DESIGN, DELIVERY AND ASSESSMENT OF TEACHING IN EUROPE

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TOPICS

BACKGROUND AND CONTEXT

LITERATURE REVIEW AND RESEARCH

THEORETICAL FRAMEWORKS

LESSONS AND FURTHER OBJECTIVES

DISCUSSION AND CONCLUSIONS



BACKGROUND



- The **Italian EQAVET National Reference Point (NRP)** was established in 2006 and is placed in **INAPP**, in Rome. It promotes a **National Board** which includes delegates from the Ministry of Labour, the Ministry of Education, the Regions and the Autonomous Provinces, the Social Partners as well as training experts and representatives belonging to the Italian Vocational Education and Training providers.
- The Italian **NRP** encourages the application of the **EU Recommendations** and supports the national process for the implementation and **development of a National QA strategy in E&T**, through the dissemination of a technical-scientific Quality Assurance culture and the circulation of practices and tools for the adoption of a continuous improvement process.



CONTEXT



- Since the last decade, the European Commission has strongly urged Member States to implement national policies that consider **Education and Training systems as key instruments of social and cultural cohesion, as well as a valuable investment in Europe's future.**
- Improving the quality of Education and Training, by optimizing the match between resources and needs to combat the imbalance between the supply and demand for skills, is the main driver of development for the future of Europe and plays an important role in promoting **active citizenship, equal opportunities and social cohesion.**



The EQAVET quality assurance framework

- The **European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET)** emerged from the **2009 Recommendation on the establishment of a European Quality Assurance Reference Framework for Education and Training**, as a European wide framework to support quality assurance in Education and Training across Europe.
- **EQAVET** does not prescribe a particular quality assurance system or approach but provides **a framework of common principles, indicative descriptors and indicators** that may help in assessing and improving the quality systems and provision.



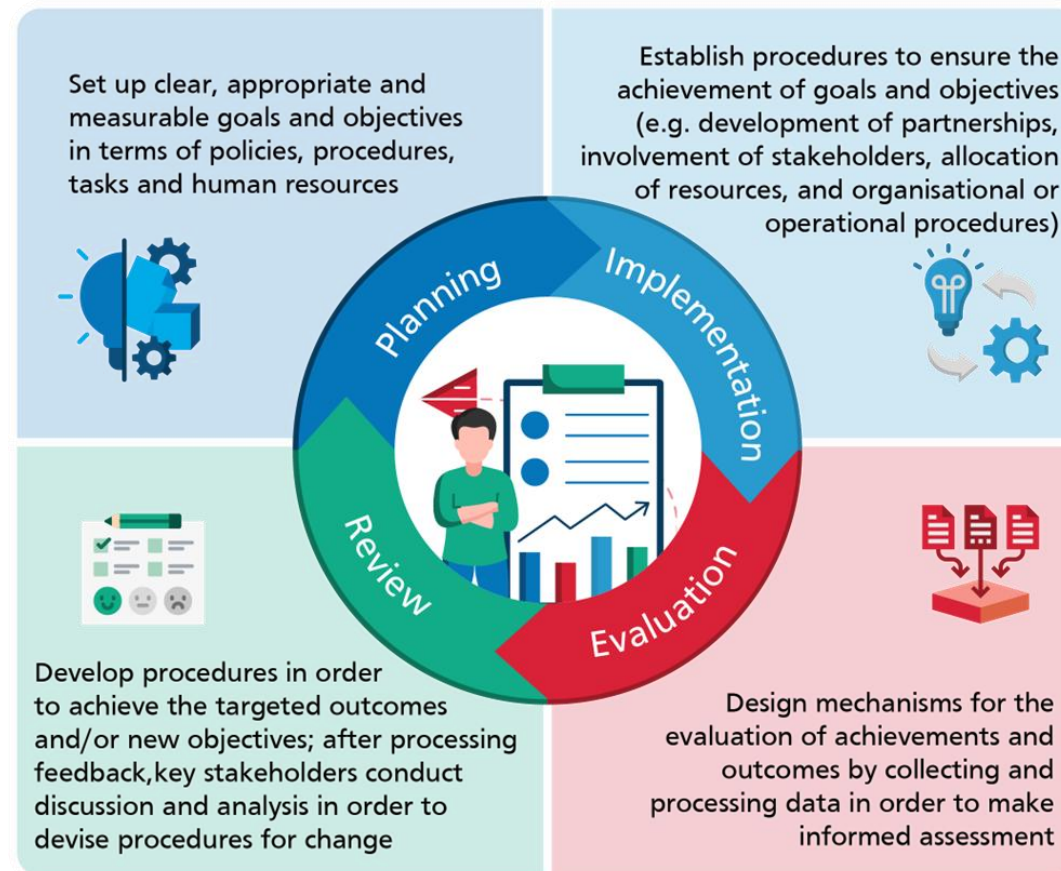
The EQAVET Quality Assurance Cycle

EQAVET supports quality assurance in Education and Training across Europe through a continuous improvement cycle, which helps systems and providers enhance education and training.

It provides a flexible framework based on a quality assurance and improvement cycle: planning, implementation, evaluation/assessment, and review/revision—along with a **selection of quality descriptors and indicators** applicable to quality management at both VET system and provider levels.



The Quality Assurance Cycle



The **2009 Recommendation of the EU Parliament and Council** launched the **European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET)** as a European wide framework to support quality assurance in Education and Training across Europe.



On November 2020, the European Council launched the **2020 Recommendation on vocational education and training for sustainable competitiveness, social fairness and resilience** in order to modernize EU VET policy.



EQAVET

- The 2020 Recommendation calls on Member States to promote measures to equip youth and adults with the knowledge, skills and competences needed in the labour market for green and digital transitions, **promotes inclusiveness and equal opportunities and builds on a culture of quality assurance.**
- In particular, the Recommendation **presents the complete EQAVET Framework** and describes how EQAVET can be used to strengthen the quality of initial and continuing VET.



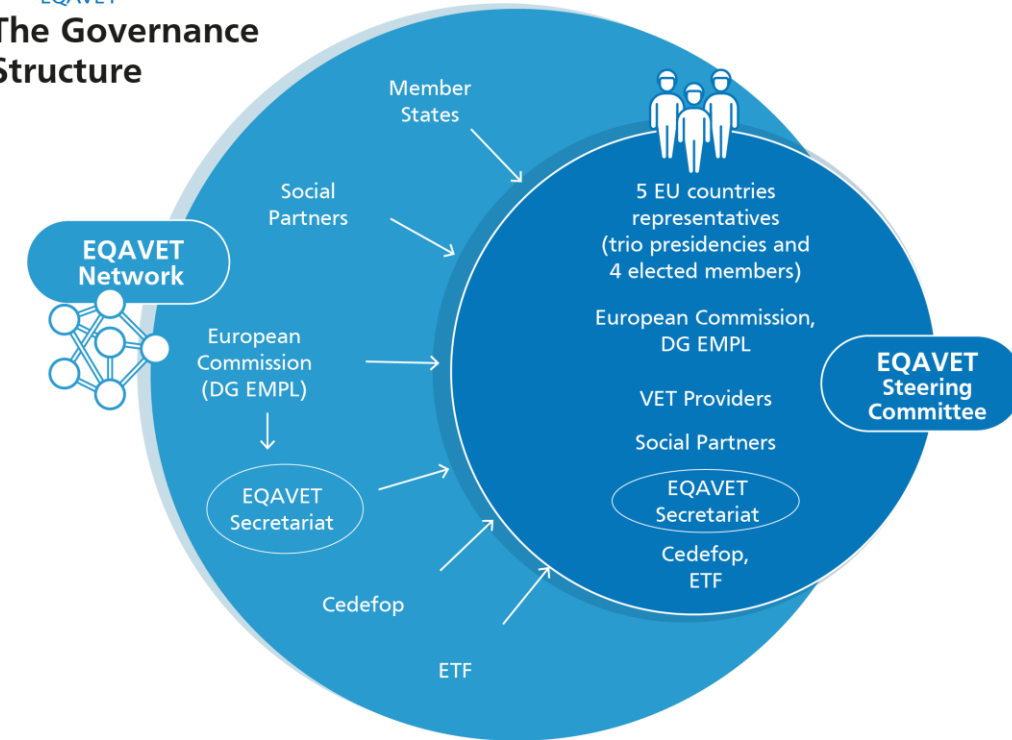
The EQAVET structure

In 2020, with the **Recommendation on vocational education and training for sustainable competitiveness, social fairness and resilience**, the EQAVET framework was extended from IVET to CVET. The EQAVET Framework can be used by providers and in systems to support the quality assurance of:

- **all learning environments** (e.g., school-based provision, work-based learning, apprenticeships, formal, informal and nonformal provision);
- **all types of learning contexts** (e.g., digital, face-to-face and blended);
- **all public and private sectors;**
- **awards and qualifications at all levels of EQF.**



The Governance Structure



NATIONAL REFERENCE POINTS



In accordance with national legislations, **NRPs bring together relevant key stakeholders** at the **national and regional levels** to support, implement and disseminate the network's activities, in particular with the aim to:

- take concrete initiatives to implement and further develop the EQAVET framework;
- inform and mobilise a range of stakeholders, including Centres of Vocational Excellence, to contribute to implementing the EQAVET framework;
- support self-evaluation as a complementary and effective means of quality assurance to allow the measurement of success and the identification of areas for improvement, including digital readiness of VET systems and institutions;
- actively participate in the EQAVET network;
- provide an updated description of the national quality assurance arrangements based on the EQAVET framework;
- engage in EU level peer reviews of quality assurance to enhance the transparency and consistency of quality assurance arrangements and reinforce trust between Member States.



NATIONAL REFERENCE POINTS



The Recommendation underlines the **strategic role of the National Reference Points (NRPs) for the dissemination of self-assessment and peer review.**

The National Reference Points of the **EU member states** and candidate countries, **European Social Partner organizations**, and the **European Commission**, jointly cooperate in the development and improvement of E&T systems, in order to implement the Recommendations (2009, 2020) and European quality guidelines.

In particular, the EQAVET network:

- promotes the use and development of the **EQAVET criteria, indicative descriptors** and **indicators**;
- supports **the improvement of quality assurance systems** at the national level;
- develops a **culture of quality**, supporting evaluation and self-assessment;
- promotes a **European dimension of quality assurance**.



The **2020 VET Recommendation** defines a peer review as *‘a type of voluntary mutual learning activity with the objective to support the improvement and transparency of quality assurance arrangements at system level not leading to accreditation procedures, based on a specific methodology to be developed by the European Network for quality assurance in vocational education and training.*

It involves a combination of internal and external evaluation: quality control and continuous improvement, as a flexible tool to be adopted in different contexts.

Peer Review at provider level	Peer Review at system level
It is based on the combination of the self-evaluation of VET institutions or centers and the Peers external evaluation, and support providers in reviewing their approach to quality assurance in order to improve their provision.	It gives the countries involved an opportunity to analyze and recalibrate their system and ensure the quality of education and training, critically reflecting on the strengths and weaknesses of quality assurance systems and measuring ongoing progress.



PEER REVIEW

- **A Peer review is carried out by Peers**, colleagues working in similar institutions or environments. Peers will act as “critical friends” by encouraging a process of mutual trust, confidence and learning among the participants, institutions and systems involved.
- Before the Peer Review visit, the evaluated organization sends **a Self-Assessment Report** to the Peers, as a fundamental document for the evaluation, and appoints a "facilitator" as an internal contact person for the Peer Review.
- A Peer Review lasts an average of 2.5 days and at the end of the visit Peers draw up a final report, as a result of their reflections on the organization weaknesses and strenghts.



PEER REVIEW



New technologies are transforming teaching and learning through digital platforms, AI tools, data and new forms of assessment. They can support lesson planning, personalised learning, feedback and decision-making, but also raise concerns about **standardisation, excessive control and teachers' professional autonomy**.

The theoretical framework combines **digital governance, professional judgement and quality assurance**, considering technology not only as a tool but as part of the educational environment.

Research gap: existing literature mainly focuses on technology adoption, opportunities and risks. Less attention is given to **how the use of new technologies can actually improve the quality of teaching and learning**.

Core argument: technology creates value when evidence is interpreted through professional judgement, peer review and quality processes.



The literature highlights four interconnected areas:

- 1) **new technologies and digital governance** (Williamson, 2017; Selwyn, 2019);
- 2) **technology-supported teaching, learning and assessment** (Holmes et al., 2019; Qian, 2025);
- 3) **teachers' digital and data literacy** (Mandinach & Gummer, 2016);
- 4) and **peer review for professional learning and teaching quality** (Zeng, 2020; Cutroni & Paladino, 2023).

Recent studies show that new technologies can support **lesson design, personalised learning, feedback and formative assessment**, but their educational value depends on pedagogical choices, teachers' competences and institutional conditions (Qian, 2025; Baggia et al., 2026).

RQ1: How are new technologies reconfiguring design, delivery and assessment of teaching?

RQ2: Under what conditions can technology improve teaching and learning quality?

RQ3: How can QA measures (Peer Review) and guidelines (ESG) support continuous quality improvement?



The key question is not **how much technology is used**, but **whether it improves teaching and learning**.

European quality frameworks provide a strong connection:

- 1) **ESG** emphasises student-centred learning, teaching, assessment, monitoring and institutional responsibility.
- 2) **EQAVET** supports continuous improvement through four phases: Planning → Implementation → Evaluation → Review. New technologies can support each phase, but evidence must be interpreted and translated into improvement.

Thus, technology needs to become part of a **quality culture**, rather than simply an innovation tool.

Peer review creates the bridge from technology and data to meaningful educational improvement



FINDINGS: OPPORTUNITIES AND CHALLENGES



The analysis shows a **dual effect of new technologies on teaching and learning**. On the one hand, they can support more personalised learning, faster feedback, flexible teaching approaches and better use of educational evidence. On the other hand, these opportunities create new challenges for teachers and institutions in terms of QA.

In particular:

- **personalisation can also lead to standardisation**, when similar technologies generate similar teaching approaches;
- **more data do not automatically mean better evidence**, as some important dimensions of teaching cannot be easily measured;
- **automation can support teachers**, but excessive reliance on **technology may reduce professional judgement**;
- **greater transparency can also increase control**, affecting teachers' professional autonomy.

Key finding: technology creates opportunities, but its impact depends on **how it is managed and used in professional practice**.



FINDINGS: CHALLENGES AND LIMITATIONS



A major challenge is moving from the **individual use of new technologies** to an institutional approach based on quality improvement.

The analysis suggests that:

- teachers need **digital, data and AI literacy** to critically interpret technological outputs and make informed pedagogical decisions.
- institutions need to integrate technology into their **quality assurance processes**, rather than treating it as a separate innovation.
- **Peer Review can create a professional space** where evidence is discussed, contextualised and transformed into improvements in teaching.
- the challenge is to balance **accountability and professional learning**, ensuring that data support improvement rather than only compliance.

Limitations: the study is conceptual and document-based. Future empirical research should explore how institutions, teachers and learners experience these changes in practice.



The analysis suggests that **new technologies do not automatically improve teaching and learning**. They provide new tools, information and evidence, but their educational value depends on how they are integrated into professional and institutional practices.

In particular:

- **Evidence needs professional interpretation** before it can support pedagogical decisions.
- **Teachers remain central** in evaluating whether and how technology should be used.
- **Digital, data and AI literacy** become essential components of teachers' professional competences.

Peer review supports collective reflection, helping teachers move from individual use of technology to shared improvement practices.

Key point: the transition should be from **technology adoption to evidence-informed quality improvement**.



CONCLUSIONS: A QUALITY IMPROVEMENT CYCLE



The integration of new technologies is not only a technological change but a **quality and governance challenge for Higher Education institutions.**

The analysis suggests that:

- Universities need to move from **individual experimentation with new technologies to institutional strategies for teaching and learning quality.**
- **ESG provide the main quality framework for Higher Education**, connecting technological innovation with student-centred learning, teaching, assessment and continuous improvement.
- **Peer review can strengthen academic professionalism**, creating a space where evidence is collectively interpreted and translated into better teaching practices.

Conclusion: The challenge for Higher Education is not whether to adopt new technologies, but **how to manage their use while keeping teaching quality, student learning and professional judgement at the centre.**



THANK YOU FOR YOUR ATTENTION!

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