# Leading Sustainability in Education

## Webinar Background Note

Community for Educational Innovation - CEI

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European Commission | CEI

# BACKGROUND NOTE

# Leading Sustainability in Education

Thematic Strand 3: Education for Green and Digital Innovation

The Community for Educational Innovation (CEI) webinars bring together education, research, industry, civil society and public sector stakeholders to share good practices and discuss innovation in education. These sessions focus on strategic competence development to boost student success and advance education and training systems, aligning with the Communication of the European Commission on the Union of Skills.

This document outlines the background and key questions for the upcoming Webinar *Leading Sustainability in Education* 10 June 2026.

Educational institutions play a crucial role in advancing the green transition by creating knowledge and training future professionals in sustainable practices. Although sustainability is increasingly a standard feature of educational frameworks across Europe, significant gaps remain between strategic goals and the practical resources required for implementation. Efforts so far have often encountered obstacles, such as insufficient specialised training for educators and a lack of dedicated institutional support. This background note examines the policy context and implications of how educational institutions are integrating their operations, research, and teaching activities.

## Policy framework for sustainability in education

The European Union's sustainability agenda is framed by the *European Green Deal,*[1] the flagship of the 2019–2024 strategic agenda. This framework established ambitious climate targets, including a 55% reduction in greenhouse gas emissions by 2030 and full climate neutrality by 2050. Beyond decarbonisation, the Green Deal emphasises a just transition, ensuring social and economic support for regions moving away from fossil fuels, while prioritising biodiversity restoration and the shift toward a circular economy.

In the field of education, a key policy operationalising the Green Deal in the Vocational Education and Training (VET) level is the 2020 *Council Recommendation on Vocational Education and Training for sustainable competitiveness, social*

[1] Communication on the European Green Deal, COM(2019) 640 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52019DC0640

*fairness and resilience,*[2] which positions VET education as a tool to "manage the recovery and the just transitions to the green and digital economy." It advocates integrating *skills intelligence* (data-driven analysis of labour market trends)[3] and *work-based learning* (practical experience in real or simulated workplaces)[4] into modern curricula. Additionally, it links VET with regional innovation and *smart specialisation strategies*.[5]

This foundation was expanded by the 2022 *Council Recommendation on learning for the green transition and sustainable development*,[6] which established sustainability as a systemic priority through the following recommendations:

- **Systemic integration:** Member States are encouraged to embed sustainability into national education strategies, educational standards, and assessment frameworks to ensure it reaches all learners.
- **Whole-Institution approach:** Beyond the classroom, institutions are encouraged to embed green practices into their governance, operations, and infrastructure, involving the entire community in sustainable change.
- **Green and sustainability skills and competences:** It links education to the economy by promoting skills, competences, knowledge and attitudes necessary for navigating and solving complex environmental challenges.
- **Educator support:** By providing professional development and interdisciplinary tools, it seeks to empower educators to lead climate discussions.

Looking toward the 2024–2029 strategic agenda, the *Competitiveness Compass*[7] (2025) enhances this framework to boost Europe's economic growth by closing the innovation gap, decarbonising the economy, and reducing dependencies. This vision is operationalised through the *Union of Skills*[8] (2025), which reinforces that green skills "are key for a successful green transition and circular economy," and works toward creating an inclusive, future-oriented higher education system.

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[2] Council Recommendation on vocational education and training (VET) for sustainable competitiveness, social fairness and resilience, (2020/C 417/01), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020H1202%2801%29

[3] Cedefop, *Skills intelligence*, https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary/kompetenzanalytik

[4] Cedefop, *Work-based learning*, https://www.cedefop.europa.eu/en/tools/vet-glossary/glossary/arbeitsgestuetztes-lernen-arbeitsbasiertes-lernen-arbeitsbezogenes-lernen

[5] Smart Specialisation Strategies, https://ec.europa.eu/regional_policy/policy/communities-and-networks/s3-community-of-practice/about_en

[6] Council Recommendation on learning for the green transition and sustainable development, 2022/C 243/01, OJ C 243, 27.6.2022, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(01)

[7] European Commission, Competitiveness Compass, COM(2025) 30 final, 29 January 2025, https://commission.europa.eu/topics/competitiveness/competitiveness-compass_en

[8] Communication on the Union of Skills, COM(2025) 90 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52025DC0090

## GreenComp: The sustainability competence reference framework

GreenComp,[9] published in 2022, is the European Union's shared reference standard for sustainability competences across all levels of education and training. It provides a framework designed to support educators, institutions, and policymakers in embedding sustainability into learning at all stages of life. It introduced the concept of 'learning for sustainability,' defined as the learning that:

> "aims to nurture a sustainability mindset from childhood to adulthood with the understanding that humans are part of and depend on nature. Learners are equipped with knowledge, skills and attitudes that help them become agents of change and contribute individually and collectively to shaping futures within planetary boundaries"[10]

By providing a common language, GreenComp supports Member States in integrating sustainability systematically into their education systems. It serves as a foundational tool for curriculum design, defining learning outcomes, and supporting educator professional development. In higher education specifically, GreenComp helps institutions to embed sustainability into graduate profiles, ensuring it becomes a core dimension of every academic discipline.

The framework identifies 12 sustainability competences organised into four interrelated areas. These building blocks empower learners to develop the knowledge, skills, and attitudes required to think, plan, and act with responsibility for the planet and future generations:

- **Embodying sustainability values**: Encouraging learners to prioritise equity and justice while acknowledging that humans are an intrinsic, interdependent part of nature.
- **Embracing complexity in sustainability**: Promoting the use of systems thinking and critical inquiry to assess information, challenge the status quo, and approach multi-dimensional problems holistically.
- **Envisioning sustainable futures**: Developing futures literacy to imagine alternative scenarios and using exploratory thinking to manage transitions in the face of uncertainty.
- **Acting for sustainability**: Empowering individuals to navigate political systems, initiate collective action, and take personal responsibility to drive meaningful systemic change.

[9] Bianchi, G. et al., *GreenComp: The European Sustainability Competence Framework*, Publications Office of the EU, 2022, https://dx.doi.org/10.2760/13286

[10] Ibid, p. 13.

The implementation of GreenComp is supported by initiatives such as the *Education for Climate Coalition*,[11] a community of practice that facilitates the exchange of good practices at local and European levels. This collaborative approach ensures that the strategic goals of the European Green Deal[12] and the 2022 Council Recommendation[13] are translated into tangible action within classrooms and communities across the Union.

## Key implications of embedding sustainability in education

Embedding sustainability across the diverse missions of higher education requires a 'whole-institution approach,' where environmental and social responsibility move from peripheral activities to the core of the institution. [14]

In teaching and learning, the primary implication is a shift from isolated modules towards a cross-curricular approach.[15] By utilising GreenComp as a shared reference, institutions can redefine graduate profiles so that sustainability competences are expected attributes for all students, regardless of their field.[16] This transition necessitates integrating sustainability into educators' continuing professional development,[17] ensuring they are equipped to deliver this redefined curriculum effectively

In research and knowledge valorisation, the imperative is to break down disciplinary silos to foster the interdisciplinary collaboration required by complex sustainability challenges. As outlined in Science Europe's *Framework for the Environmental Sustainability of Research Organisations*,[18] this requires aligning research assessment and funding designs with sustainability criteria. Beyond greening their own research footprints, institutions are also recommended to strengthen knowledge valorisation to ensure scientific evidence and social innovations effectively become policy and industrial solutions.

[11] European Commission, *Education for Climate Coalition*, https://education-for-climate.ec.europa.eu

[12] Communication on the European Green Deal, COM(2019) 640 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52019DC0640

[13] Council Recommendation on learning for the green transition and sustainable development, 2022/C 243/01, OJ C 243, 27.6.2022, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(01)

[14] Council Recommendation on learning for the green transition and sustainable development, 2022/C 243/01, OJ C 243, 27.6.2022, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(01)

[15] EACEA/Eurydice, 2024.

[16] Bianchi et al., 2022.

[17] EACEA/Eurydice, 2024.

[18] Science Europe, *Framework for the Environmental Sustainability of Research Organisations: Priorities and objectives for research funding and research performing organisations towards making their activities environmentally sustainable*, 2024, https://doi.org/10.5281/zenodo.14140340

On the operational side, the campus could serve as a critical driver of credibility through the "campus-as-living-lab" model.[19] By connecting decarbonisation efforts in energy, mobility, facilities, and waste directly to their academic missions,[20] institutions transform physical infrastructure into a pedagogical tool. This enables students and researchers to use real-world operational data to test and refine sustainability solutions, bridging the gap between institutional targets and academic research.

Finally, educational institutions are also required to develop "cross-sector partnerships and collaborations between universities, local/regional governments, industry and civil society with the explicit aim to create or advance sustainability transformations in regions."[21] By embedding regional development within their mission frameworks, educational institutions act as central nodes in innovation networks. This collaborative approach ensures that local solutions are co-created and scaled to meet European and global sustainability goals.

## Challenges in leading sustainability in education

Despite the alignment of European policy frameworks, institutions face several structural and systemic barriers to fulfilling their role in the green transition:

- **Bridging the strategy-execution gap:** While 85% of higher education institutions have implemented greening measures, a significant gap remains between strategic pledges and operational reality.[22] Meaningful progress is consistently hindered by underfunding (59%) and insufficient staff resources (55%), suggesting that institutional capacity has not yet caught up with political intent.
- **Educators' continuing professional development:** Embedding sustainability requires educators proficient in transformative pedagogies, such as systems thinking and futures literacy. However, the Eurydice report[23] reveals that only a minority of European systems (17 out of 39) have integrated sustainability into initial teacher education, leaving professional

[19] Verhoef, L., and Bossert, M., *The University Campus as a Living Lab for Sustainability: A Practitioner's Guide and Handbook*, International Sustainable Campus Network (ISCN), 2024, https://international-sustainable-campus-network.org/communities-of-practice/campus-as-a-living-lab-community-of-practice/

[20] SDSN, Climateworks Centre, and Monash University, *Net zero on campus: A guide and accompanying toolkit for universities and colleges to accelerate climate action worldwide*, 2022, https://www.unsdsn.org/resources/net-zero-on-campus-a-guide-and-accompanying-toolkit-for-universities-and-colleges-to-accelerate-climate-action-worldwide/

[21] Trippl, M., Schwaag Serger, S., and Erdős, K., *Rethinking the Role of Universities in Place-Based Innovation Policies for Sustainability Transitions*, p. 9, 2023,

[22] Stoeber & Gaebel, 2025.

[23] EACEA/Eurydice, 2024.

development largely ad hoc and poorly recognised in career advancement structures.

- **Introducing curricular reform:** Cross-curricular integration of sustainability skills is usually achieved through (1) transversal key competence frameworks; (2) cross-curricular learning areas in a separate part of the curriculum, or (3) integrated in different subject areas separately.[24] While GreenComp provides a reference standard, its implementation across diverse fields depends on stronger institutional leadership, structural incentives, and national policies.[25]
- **Monitoring learning for sustainability**: There is a lack of robust, comparable systems for tracking sustainability learning outcomes. While institutions often report against external frameworks such as the UN SDGs, these frameworks predominantly measure institutional inputs rather than actual competence development. Internal mechanisms to monitor student progress across disciplines remain underdeveloped, and the absence of a common EU-level approach prevents the collection of high-quality, longitudinal data necessary for evidence-based policy.[26]
- **Knowledge valorisation pathways**: The transition from research to policy impact remains slow. As highlighted by Science Europe, fulfilling the role of 'knowledge broker' requires fundamental research assessment reform and dedicated funding designs that reward societal impact and interdisciplinary collaboration alongside traditional academic depth.[27]
- **Responding to regional sustainability challenges**: Effective transition requires deep 'place-based' engagement. However, institutions often struggle to balance "the nature of the challenges the region is facing, its asset base, and, most importantly, the 'absorption capacity' of regional stakeholders for academic knowledge and other outputs produced by universities."[28]

[24] Ibid. p. 10.

[25] Bianchi et al. 2022.

[26] European Commission, Directorate-General for Education, Youth, Sport and Culture, *Monitoring learning for sustainability: developing a cross-EU approach : final report* , Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2766/653214

[27] Science Europe, 2024.

[28] Verhoef and Bossert, 2024.

## Webinar 'Leading Sustainability in Education'

This webinar examines how education translates sustainability commitments into embedded practice across operations, curriculum, research, and regional engagement in higher education. Key questions guiding the discussion will include:

- How can educators ensure that sustainability competences are embedded into the curricula of diverse disciplines?
- What are the most common tensions academic leaders face when balancing traditional institutional priorities with the changes required by sustainability transformation?
- How can higher education institutions better align their research missions with local regional needs to ensure that 'green' innovations are effectively valorised and adopted by local industries?

This webinar is part of the 'Thematic Strand 3: Education for Green and Digital Innovation.' It also includes the webinars Twin Transition – Understanding the Why and Building the How (5 March 2026) and Educating to Thrive in the Digital World (29 April 2026, 15:30 CET).