TEACHING FOR TOMORROW: THE ROLE OF EDUCATORS AS AGENTS OF CHANGE

Authors:

Marina Baptista *- EWF*

Simona Jursová *– Technical University of Ostrava*

Lucía Fraga *– CETMAR*

Sadbh de Staic *- CECIMO*

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The Need to Accelerate the Green Transition

Governments worldwide are facing the urgent need to transition to sustainable economies. This process involves shifting to renewable energy sources, adopting circular economy principles, and implementing environmentally friendly practices. According to the International Labour Organization (ILO), **a greener economy could generate over 24 million jobs by 2030**, provided the global workforce is equipped with essential green skills. [1] Similarly, the International Renewable Energy Agency (IRENA) estimates that **renewable energy alone could create 40 million jobs globally by 2050**, positioning green industries as critical drivers of economic growth. [2]

Growing Demand for Green Skills

The World Economic Forum (WEF) has identified a surge in demand for skills that are related to energy efficiency, environmental management, and sustainable supply chains, emphasising the necessity of high-quality green education. At the same time, traditional industries face significant transformations to meet sustainability goals. [4]

As well as this, the Organisation for Economic Co-operation and Development (OECD) reports that 14% of jobs in carbon-intensive industries are at high risk of automation, underscoring the importance of reskilling and upskilling. [5]

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High-quality green education is essential for equipping learners with competencies such as systems thinking, green technology expertise and sustainability-focused problem-solving. By embedding these skills into education systems, nations can foster a resilient workforce capable of leading the green transition.

Recognising this potential, the GREEN project empowers educators with tools, frameworks, and training to integrate sustainability into curricula effectively. By positioning teachers as leaders of the green transition, the project ensures education remains central to building a sustainable future.

Empowering Educators for a Sustainable Future

Educators play a pivotal role in shaping future generations and advancing the green transition. As "multiplier agents," they influence not only learners but also families, communities, and workplaces, creating a systemic impact on society.

The GREEN project recognises this transformative role, equipping educators—whether schoolteachers, vocational trainers, or mentors—with essential green skills. These skills enable educators to embed critical thinking, systems thinking, and problem-solving into their teaching practices, fostering a mindset shift toward sustainability. [5] By transitioning from traditional instruction to ecological, participative, and relational learning, educators can encourage students to engage with sustainability challenges actively. [6]

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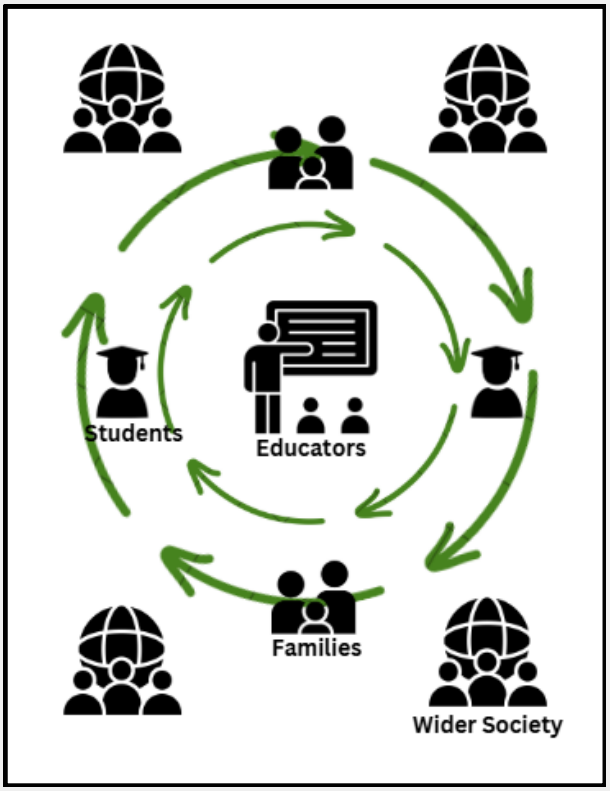

Figure 1: The interconnected roles of students, educators, families and society in fostering a sustainable future.

Through tools like the GreenComp framework [7] and structured training modules, the GREEN project provides educators with methodologies to address real-world environmental problems. Reflective questions, such as "How can I implement this in my teaching?" and "Which methods best suit hands-on learning?", encourage systemic thinking and ensure sustainability becomes integral to education.

By empowering educators, the GREEN project builds community resilience and amplifies the impact of green teaching beyond the classroom. Educators are positioned as sustainability champions, laying the foundation for a greener and more sustainable future.

The Green VET Network: Building a Community for Sustainable Education

The **European Green VET Network,** a key initiative of the GREEN project, provides a collaborative platform for vocational education and training (VET) providers across Europe. By focusing on trainer development and pedagogical green practices, the network supports VET for the green transition, positioning educators as champions of sustainability within their institutions and communities.

The Green VET network promotes cross-sector collaboration, develops standardized green curriculum frameworks, and facilitates access to resources. At its core lies the recognition of trainers as pivotal agents in the green transition. Through capacity-building programs, trainers acquire the skills needed to integrate sustainability principles into their curricula, emphasizing hands-on learning and innovative methodologies.

Figure 2: The GREEN Label

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The Green VET Network fosters a dynamic community of practice, enabling trainers to share insights, collaborate on innovative teaching strategies, and exchange ideas on sustainability-focused education. This collaborative environment ensures continuous growth and adaptation among educators.

To inspire institutions, the network introduces the prestigious Green Label award, recognising excellence in embedding sustainability into educational practices. In order to join the European Green VET Network, education providers must meet specific criteria, such as integrating green principles into curricula and adopting forward-thinking teaching approaches.

By promoting excellence and collaboration, the Green VET Network equips educators with the tools and inspiration needed to prepare the next generation of eco-conscious professionals, driving a global shift toward sustainability.

Figure 3: Train the Trainers event in Nicosia, Cyprus

Integrating Green Skills in Teaching Curricula

Green skills, defined by the ESCO taxonomy as those that reduce the negative environmental impact of human activity, span fields like engineering, manufacturing, and natural sciences. [7] The GREEN project supports educators in embedding these skills through targeted resources. For example, the Guidance Document for the Uptake of Green Skills and Best Practices by VET Systems outlines concrete methods for implementing sustainability training. [8] This includes templates for analysing curricula, two detailed training courses for key sectors, and guiding questions to help trainers incorporate systemic and critical thinking into their programs. tionally, introductory sustainability modules are proposed to help students establish foundational knowledge.

The project also emphasises collaborative and student-center methodologies. Through the GREEN Toolkit (to be launched on the European Final Conference in May) educators will have access to training materials and best-practices aligned with the GreenComp and EQF Frameworks. These resources will promote the use of systemic thinking and problem-solving among learners.

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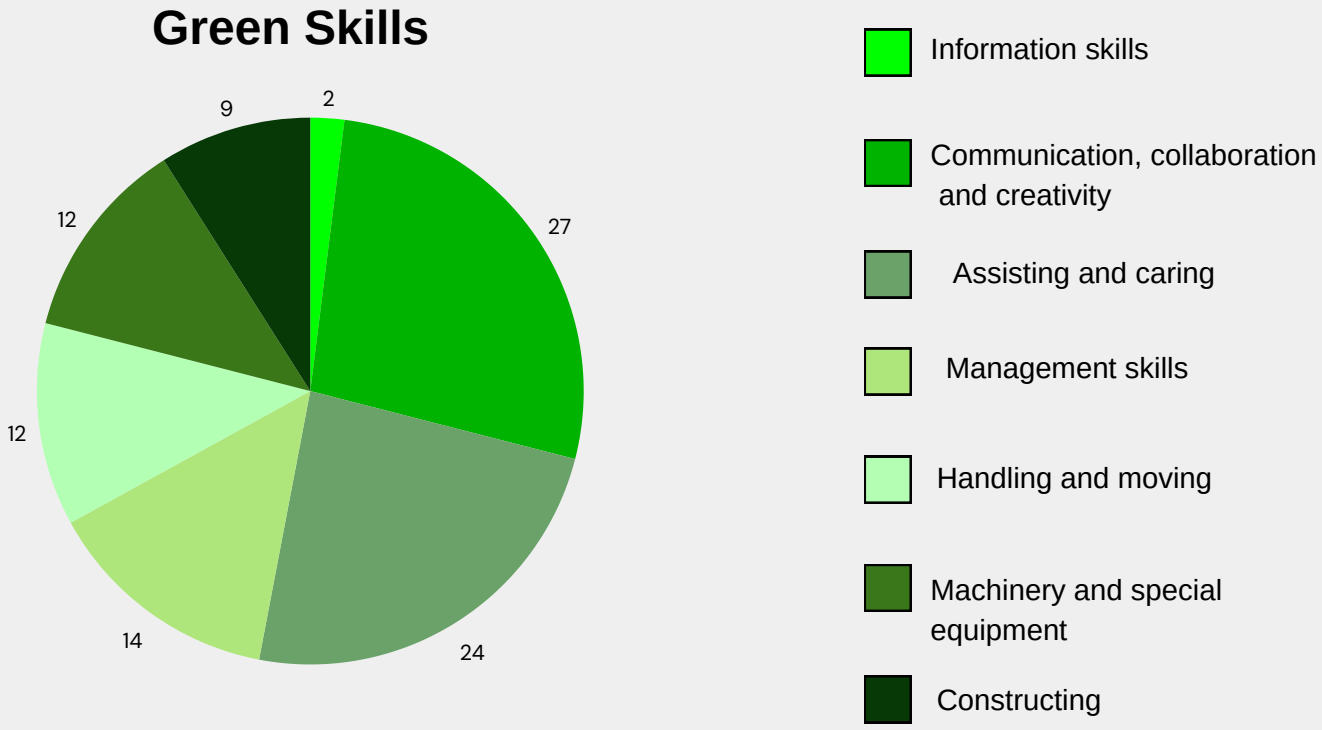

Figure 4: ESCO's Breakdown of Green Skills Across Key Competency Areas

A broader list of skills and knowledge areas relevant to sustainability was proposed, aligning with the GreenComp framework and European Qualifications Framework (EQF).

The GREEN project proposes a fully integrated approach to embedding green skills into technical training. It emphasises participatory, student-centered methodologies that foster critical and systemic thinking while addressing complex sustainability challenges. To support this effort, the project developed the European Training Guidelines for Green Skills, which include:

- A transversal unit of competence titled "Pedagogical Practices for a Greener Tomorrow: Trainer's Edition".
- Tools and templates to analyse training curricula for sustainability integration.
- Introductory sustainability training for students to build foundational knowledge.

By aligning teaching practices with sustainability principles, educators can prepare students to contribute effectively to a greener future.

Testimonials: Educators in Action

The experiences of educators and trainers highlight the transformative impact of the Green VET Network. From equipping teachers with the tools to integrate sustainability into their classrooms to inspiring systemic change across institutions, their voices underscore the importance of collaboration, innovation, and forward-thinking educational practices. Below are some reflections from those who have directly benefited from the network's initiatives.

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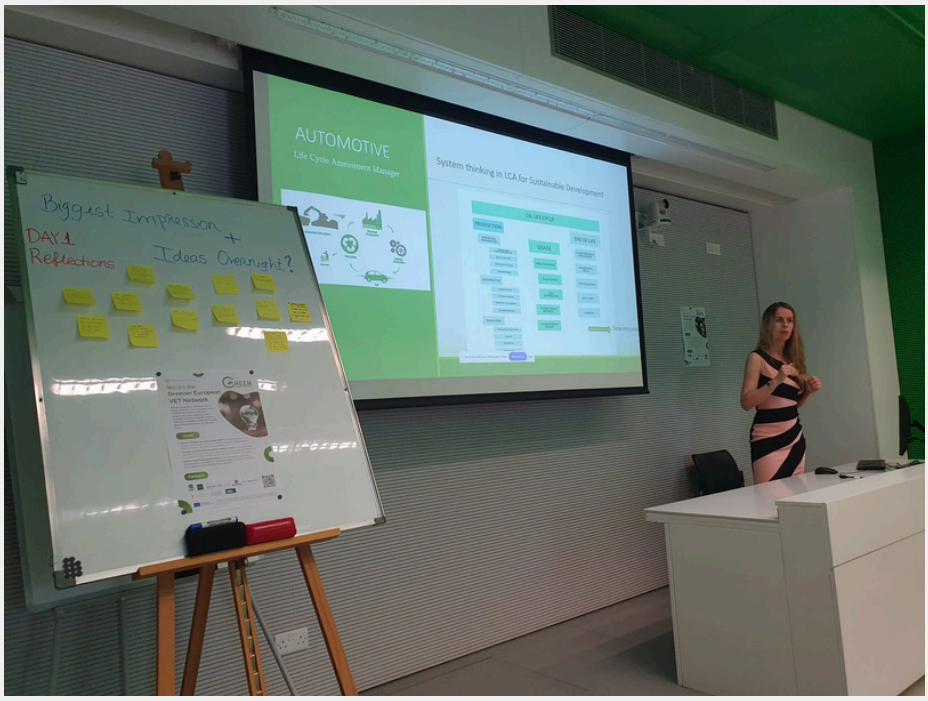

Figure 5: Train the Trainers event in Nicosia, Cyprus

- **Tim Olschewski** (Project Manager at AMbitious): "As a provider of (virtual) training in the field of additive manufacturing, we at AMbitious place great emphasis on sustainable practices essential for responsibly implementing future-oriented technologies. We are proud to be part of the GREEN project."
- **Lara Serra** (Project Manager at ISQ Akademy): "The GREEN VET Network has strengthened my role as an agent of change, equipping me to promote sustainability through education."
- **Vicente Díaz Casás** (Head of the Engineering Polytechnic School of Ferrol): "Participating in the GREEN VET Network has been a unique opportunity to compare with other teachers new methodological approaches to integrate the Sustainable Development Goals into teaching activity. Integrating these objectives into the academic curriculum is key to achieving an active society with the achievement of these objectives. Sharing different approaches and experiences has been very productive. It has undoubtedly been useful in reformulating my teaching activity and has helped me to improve my teaching."
- **Marta Pérez Durán** (Teacher at Ferrolterra VET Centre): "Participating in the Training of Trainers by the Green VET Network has been an enriching experience for me as an educator. These sessions have provided valuable methodologies to refine and continue implementing a transversal approach to green skills in education. In VET schools, where students are prepared for professional environments and undertake a multitude of practical projects, this holistic approach is crucial. Sustainability must not be confined to a single subject but embedded across all disciplines. This training has increased my conscientious and resolute commitment to sustainable practices and equipped me with strategies to cultivate systemic and critical thinking in

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my students, empowering them to address the complexities of sustainability challenges."

Conclusion: Empowering Educators for a Greener Tomorrow

Educators are key to driving the green transition, shaping the mindsets and skills of future generations. By embedding sustainability principles into teaching, they foster ecological responsibility, societal awareness, and innovative thinking. The GREEN VET Network provides educators with the tools and methodologies needed to achieve this, while promoting collaboration and innovation.

By bridging theory and practice, educators inspire students to lead change in their careers and communities. The GREEN project demonstrates how education can catalyse systemic change by integrating sustainability across disciplines, preparing learners to address global challenges and succeed in the green economy.

Empowering educators requires sustained commitment from governments, institutions, and communities to prioritise green education. Initiatives like the GreenComp framework and Green VET Network establish a robust ecosystem where sustainability becomes central to teaching and learning. Together, we can create a resilient, sustainable future driven by informed individuals ready to lead the green transition.

Join us at the Green Project Conference on 13th May in Brussels to shape the future of sustainable education and vocational training!

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List of References

1. International Labour Organization (ILO). "World Employment and Social Outlook 2018: Greening with jobs", 2018. Available at https://www.ilo.org/publications/world-employment-and-social-outlook-2018-greening-jobs
2. International Renewable Energy Agency (IRENA). "Accelerated Energy Transition Can Add 40 million Energy Sector Jobs by 2050", 2023. Available at https://www.irena.org/News/pressreleases/2023/Nov/Accelerated-Energy-Transition-Can-Add-40-million-Energy-Sector-Jobs-by-2050
3. World Economic Forum (WEF). "Jobs of Tomorrow: Mapping Opportunity in the New Economy," 2020. Available at https://www.weforum.org/publications/jobs-of-tomorrow-mapping-opportunity-in-the-new-economy/
4. Organisation for Economic Co-operation and Development (OECD). "Automation Risks in Carbon-Intensive Industries," 2018. Available at https://www.oecd.org/en/publications/automation-skills-use-and-training_2e2f4eea-en.html
5. UNESCO. "Education for Sustainable Development Goals: Learning Objectives," 2017. Available at https://doi.org/10.54675/CGBA9153
6. Sterling, S. "Educating for the Future We Want: Transformative Learning for a Sustainable World," 2021. Available at https://greattransition.org/gti-forum/pedagogy-transition-sterling
7. Green*Comp Network*
8. European Commission. "ESCO Skills and Knowledge Concepts: Labelling for the Green Transition," 2022. Available at https://esco.ec.europa.eu/en/about-esco/publications/publication/green-skills-and-knowledge-concepts-labelling-esco
9. GREEN Project. "D3.3 Guidance Document for the Uptake of Green Skills and Best Practices by VET Systems," 2023. Available at https://www.greenvetnetwork.eu/project-results.html

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CONTACT

https://greenvetnetwork.eu/

info@greenvetnetwork.eu

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