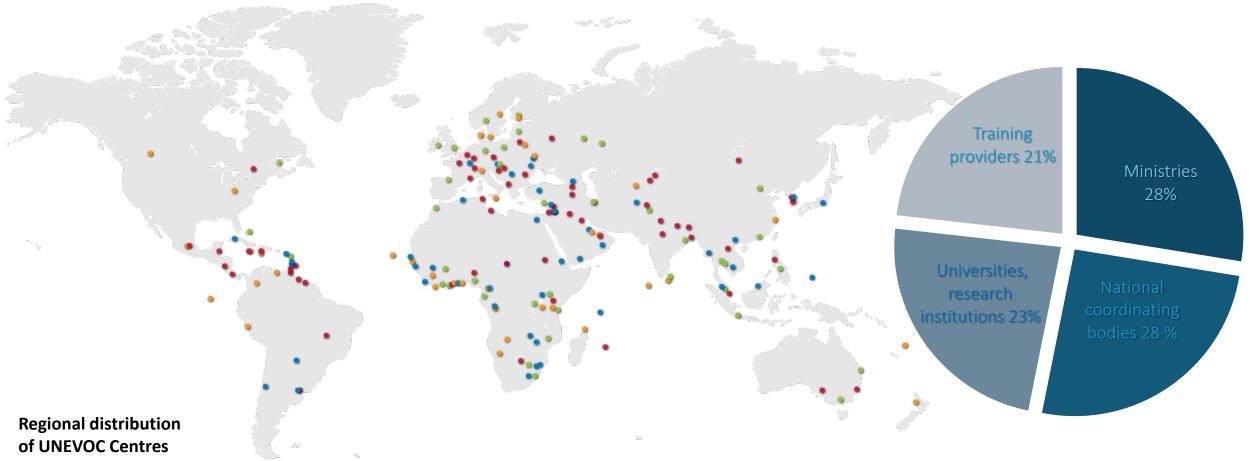


Greening TVET – meeting skill needs for a greener future (global perspective)

Presented by Ms. Kenneth Barrientos, Thematic Team Leader UNESCO-UNEVOC International Centre for TVET



UNEVOC Network: 245 UNEVOC Centres in 152 countries



• Africa: 62

Arab States: 27

• Asia and the Pacific: 62

• Europe and North America: 55

• Latin America and the Caribbean: 39

Global reach of UNEVOC Network

- 66.7 million students
- 2.0 million teachers and trainers





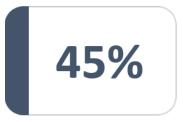
Key challenges and opportunities

To address...



Green skills in TVET strategy

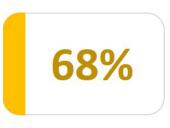
Member States that have reported an increased emphasis on green skills and sustainable skills



National curricula

Little reference to environmental themes in national education documents

To leverage...



National TVET policies

Member States that introduced or adopted policies or practices to facilitate the greening of TVET systems in the last four years.



Practical guide

Meeting skill needs for the green transition Greening TVET for a greener future

Online portal Greening TVET for a greener future

Meeting skill needs for the green transition



for a greener future

Overview

Technical Vocational Education and Training (TVET) plays a crucial role in the green economy by equipping individuals with skills for sustainable practices. As industries shift towards eco-friendly operations. TVET adapts its curriculum to focus on ecofriendly technologies and sustainable development. This prepares students for green careers and fosters a deeper understanding of sustainability, promoting environmentally conscious behaviors. By connecting education to the labor market, TVET shapes a capable workforce committed to supporting the green transition.

Where we are

doi: 10.5281/14230060

Technical Vocational Education and Training (TVET) has been undergoing significant changes (UNESCO, 2022). Digitalization, accelerated by remote learning during the COVID-19 pandemic and the advent of new tools in data analytics and artificial intelligence (AI), is the most prominent. Additionally, there have been shifts towards competency-based approaches, learner-centered and personalized teaching practices, and greater involvement of TVET institutions in regional development and partnerships.

Institutional approaches for a green future



Greening principles and values need to be embedded not just in formal plans and learning activities. Greening needs to become part of the everyday culture



Curricula need to be attuned to the requirements of society and the changing economy. New pedagogies are needed to support learners of TVET to be equipped with the technical knowledge and skills to work effectively and behaviours to help shape sustainable societies.



Teachers' and trainers' professional developmen

Teachers and trainers need to be provided with opportunities to upgrade their skills, whether through formal learning or by making available to them opportunities to develop their roles and cultivate skills and practices among learners and peers.



Campus and learning environment

TVET schools and training institutions should not only be places of practice-based instruction but can also turn into green spaces to learn about environmental topics and trends in the professions, exercise sustainability principles, and apply skills for demonstrating green



Community, workplace and lifelong learning

TVET institutions can engage with its wider community of business stakeholders, including in the informal economy. and community leaders, supporting them to tackle environmental challenges whilst developing learners'



Research, innovation and enterprise

TVET institutions can use research or work in collaboration with research-orientated partners to collect and disseminate data linked to skills and employment in green occupations. To support green goals and regional development strategies, the role of TVET in research and innovation development must be strengthened and made more accessible to support enterprise to thrive in the developing

From policy to institution level action

What are the needs?

What is the guide about?

- adaption of SDGs in education and training
- national climate ambition and TVET alignment
- skills in every occupation and sector
- institutional approaches are the foundation for learning

- approaches and concept
- skills and competency requirements in sectors
- guidance about the different goals for managers and teachers
- policy enablers
- examples of implementation
- useful reading resources
- indicators for monitoring actions

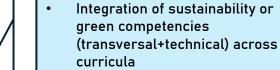


Approaches for engaging institutions in the greening TVET process

- **Institutional planning**
- - and culture

PLAN





LINK: Greening TVET guide

Shift towards learner-centred pedagogy

- Policy and governance alignment
- Curriculum enhancement and relevance
- Leadership commitment
- Stakeholder engagement
- **Cultural transformation**
- Monitoring and evaluation
- TVET as a driver of green innovation and applied research
- TVET as an incubator or accelerator of green business ideas, social business ventures and environmentally- and socially-responsible enterprise

cities/local government

units) and partnering with

Research, innovation and enterprise

Community, workplace and lifelong learning





Institutional approaches for a greener future







- Curriculum and pedagogy
- Equip teachers and trainers with relevant green competencies for their role in the transition to green economy and society
- Investing in teachers and trainers to enable them environmental stewardship
- Connect with industry

Teachers' and trainers' professional development

Engage with TVET institution's wider community of business stakeholders, including in the informal economy, and community leaders (e.g.,

them

Campus and learning environment

UNESCO-UNEVOC International Centre for TVET

Create an environment where TVET schools and training institutions are not only places of training and instruction, but also as: green physical spaces and green 'living laboratories

Greening TVET curricula and training

UNEVOC Technical Assistance
Review of existing programmes (various technical disciplines) and development of new programmes

Implementation partners: Mauritius Institute for Training and Development (MITD) – UNEVOC Center & Circulab France



Identified skills for integration, strengthening



Generic skills

- Sustainable Development
- Environment Fauna and Flora, Preservation
- Pollution: Types, Preventive Measures
- Renewable and Non-renewable Resources
- Use of Clean Energy Sources
- 5 R's, Etc.



Trade-specific skills

- Energy Saving Measures
- Use of Eco-friendly Materials
- Water Conservation
- Electric/Hybrid Vehicles

- Use of Refrigerants
- Alternatives to Use of Pesticides
- Organic Farming
- Disposal of Used Engine Oil



- National certificate level 4 in sustainable agriculture
- National certificate level 5 in solar energy technology
- National diploma in renewable energy technology





TVET teacher professional development support

ISSUES

- Lack of TVET and climate policy coherence
- Unmet demand for qualified green workforce
- Outdated curricula and training
- Lack of collaboration and exchange with industry



UNEVOC's interventions

- Facilitated consultation and dialogues between ministry, stakeholders and social partners
- Mapping of skill and opportunity gaps in Thai colleges
- Green TVET roadmap development
- Professional development for TVET educators

Outputs

- ✓ OVEC Green TVET roadmap
- √ 45 strengthened leadership vision
- ✓ 60 OVEC leaders and educators built their capacity on green and inclusive TVET approach

Peer learning, stakeholder engagement and innovation – Asia, Europe, Africa, LAC

Bridging Innovation and Learning in TVET (BILT) project (phases 1-3) (UNEVOC-BMBF/BIBB Germany) provides a platform for policy learning and networking



Strengthen BRIDGING between regions and between institutions

- Thematic workshops, hosted in different regions
- Global conference 'Learning Forum' every two years (2025)





Foster INNOVATION and knowledge generation

- Joint development of publications, research analysis, scoping surveys
- Documentation of 'Innovation and Learning Practices'



unevoc.unesco.org/bilt



Reinforce peer LEARNING and knowledge transfer

- Promotion of transferable, innovative practices and policies: Learning Labs and webinar series
- Matchmaking between interested institutions

Implemented



with support of



and sponsored by









New Qualifications and Competencies

How can they be put into practice, ensuring future-oriented, attractive TVET career paths?

- Identification through suitable approaches and instruments;
- Integration into curricula and training regulations; and
- Implementation in teaching and training approaches.



Entrepreneurship

Unlocking the potential of innovative entrepreneurial activities and fostering entrepreneurial culture



Greening

Responding to new development paradigms for sustainability and reduced environmental impact



Digitalization

Providing a response to new skills demands, as technology has permeated the world of work and is changing the profile of jobs



Migration

Accelerating the integration of migrants into their host communities, and allowing them to become productive members of the workforce

BILT Expert Group – TVET for hospitality and tourism (2023)





SWISS FEDERAL UNIVERSITY FOR VOCATIONAL EDUCATION AND TRAINING

Swiss excellence in vocational education and training









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