UNECE activities on teaching standards

Note from UNECE secretariat

The UNECE Working Party on regulatory cooperation and standardization policies (Working Party 6) has a mandate to promote an awareness building of standards and of their use. As a part of these activities in 2012 WP6 established a group of experts on education (StaRT-ED) and elaborated a model educational programme on education on standardization consisting of 15 modules (for more information see: www.unece.org/trade/wp6/thematic-areas/education). This programme and teaching materials from UNECE were used by many universities in the UNECE region to teach standards to students.

In November 2019, in the framework of the annual WP6 session a high-level panel on education was held. During discussions a suggestion was made to elaborate an education course on environmental issues and on environmental standards. The debate on teaching approaches and on subject areas continued further and during the StaRT-ED webinar in November 2021 a proposal was made to prepare a module on environmental issues to be included into the existing UNECE model programme on education on standardization (mentioned above).

This paper contains the first draft of such module for discussion and comments from delegates and from professors teaching standards and related issues.

UNECE model educational programme on education about standardization

Environmental issues and challenges (new additional module)

Introduction

Today climate change became one of the most acute global challenges for the mankind. The necessity to protect environment and to make the activities of the Man sustainable became evident for the society and already led to a number of global “green” initiatives on various levels (including international). Environmental issues today influence the life of every citizen and activity of every business. Understanding environmental footprint and diminishing it, adaptation of the society through new sustainable consumption and industrial patterns are essential for consumers and companies. Various environment-friendly standards and practices can contribute to reducing anthropogenic pressure on the environment.

Issues for consideration:

Climate change. Human (anthropogenic) impact on the environment includes changes to biophysical environments and to ecosystems, biodiversity, and natural resources caused directly or indirectly by humans, including global warming, environmental degradation and global ecological crisis. Quality of soil, water, air; agro-ecosystems. Necessity of ecological risks/impact mitigation. Global monetary assessment of ecosystems. Nature capital.

Concepts of: Sustainable Development, Climate change, green economy, Circular economy, Responsible consumption.
Renewable energy (solar, wind, hydro, wave, tidal, hydro) and fossil fuels (oil, coal, gas).

Global initiatives. UN Sustainable Development Goals; Paris Agreement on climate change (2015); UN convention on hazardous waste; UN Compact; UN Sustainable energy for all; Basel agreement convention, etc. Global financing of environmental goods.


National environmental legislation. State environmental authorities and controls. Principles of environmental management (company, industry, region, country level). Environmental disclosure standards and practices (Global Reporting Initiative, GRI; SASB standards, etc.). EU rules on corporate disclosure of climate-related information.

Environmentally sustainable company activities and supply chains. Environmental impact assessment; environmental consequences of a proposed activity (their incorporation at planning, design, approval and implementation stages). Resources and energy efficiency management.

Environmental management system standards (ISO 14000 series); their relationship to quality management standards (ISO 9000 series), safety management standards (OHSAS 18000 series) and energy management standards (ISO 50000 series).

Environmental management system: basic principles and components in accordance with the requirements of the international standard ISO 14000:2015. Environmental policy of the company; its impact. Setting goals and objectives of the organization in the field of environmental management. Performance indicators: management effectiveness, environmental performance, audit, etc.

Time schedule: 1 teaching unit (90 minutes)

Questions (from UNECE secretariat) on the draft Module to START-ED experts:

1) do “issues for consideration” cover the subject (questions to add or to delete)?
2) logic (sequence) of presentation of issues – any suggestions?
3) logic of presentation of the environmental concepts? For example, there are concepts of: Sustainable Development, Climate change, green economy, Circular economy, Responsible consumption, etc.
   How do they work separately and together? Should they be considered in parallel? or some of them make up an element of others (to what extent wider concepts include narrower ones?)

For suggestions on practical implementation of the Module please see ANNEXes A and B below
Suggestions on implementation of the Module
(from Matei Bel University in Banska Bystrica, Slovakia)

The topic is important and interdisciplinary. We think that the key problems are identified in the draft Module and experts from the different disciplines should be able to find and build the appropriate topic for their specialization.

We find 90 minutes relevant for each selected issue with the introduction, explanation, and conclusion. The structure of the course depends on the purpose and educational level of the participants.

It should be clear - who are the trainees and who are the trainers.

The draft Module is giving a space for different alternatives. Some issues could be seriously involved in the syllabus of the existing general courses such as macroeconomics, microeconomics, law, management, etc.

We see several lines of effective implementation of the Module using multi and interdisciplinary approaches in teaching standards:

1. to bring the SDGs and environmental issues into the university curricula and teaching standardization in this area as a specific topic/lecture in the existing general courses;
2. to bring the SDGs and environmental issues into the university curricula and teaching standardization in this area as a full specific course - this is a very ambitious idea, but not impossible. This depends on the national legislative and national frameworks of education and conditions for accreditation of the new courses;
3. to bring the SDGs and environmental issues and teaching standardization to the level of postgraduates;
4. to bring the SDGs and environmental issues and teaching standardization to the representatives of the third sector, NGOs, initiatives and voluntaries who are playing an active role and have an impact on the society in the achievement of the SDGs.

We find very important the legislative and institutional aspects of the processes and also the discussion of policy implications.
Comments on Module from School of Business, Okanagan College, Canada

The module identifies a broad range of issues for consideration and involves many concepts (bottom of pg. 1) on the topic of environmental sustainability. I agree that all items (issues/concepts) are relevant to the topic, and together, possesses substantial/sufficient scope. The list of standards identified on page 2 is well aligned with the issues/concepts declared.

Given the relatively limited (i.e. proposed) 90min time frame and very large scope, I am left to conclude that the (undeclared) learning outcomes are necessarily limited to the first one or two cognitive domains of Bloom’s taxonomy (i.e. remember/understand). Each of the standards identified on page 2 is large and detailed, therefore, it is not feasible for learners to apply/analyze/evaluate the proposed content. In other words, I believe that “awareness of international standards for environmental sustainability” is an appropriate learning outcome for the time frame.

I have found through my teaching experience in this domain that knowledge of standards (i.e. outcomes to be achieved) needs to be paired with sustainability frameworks or models (i.e. guidance/processes for achieving outcomes required by standards) such that learners can move beyond mere memorization of the existing standards to a higher cognitive domain (apply/analyze/evaluate) via case study application. There are at least as many sustainability frameworks/models as there are sustainability standards, therefore, it is another major area of awareness and exploration for learners. Sustainability models/frameworks provide context for the standards, so it is important that learners be exposed to both.

To conclude, I appreciate the module as proposed. It nicely categorizes standards and identifies many prominent international sustainability standards. This is excellent for foundational awareness of the broad scope of environmental sustainability. Information in the proposed module overlaps with information I currently provide in our Sustainable Management course, but the module is helpful in that it identifies additional standards. I would be pleased to include such UNECE materials as references in the curriculum of future sections of our sustainability course.