

## Practices within Education for Sustainable Development



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### Practices within ESD

The **main aim** of this topic is to explore the main approaches, techniques and practices within education for sustainable development to be applied in any context of an organization, and at non-formal, informal or formal processes of any level of education.

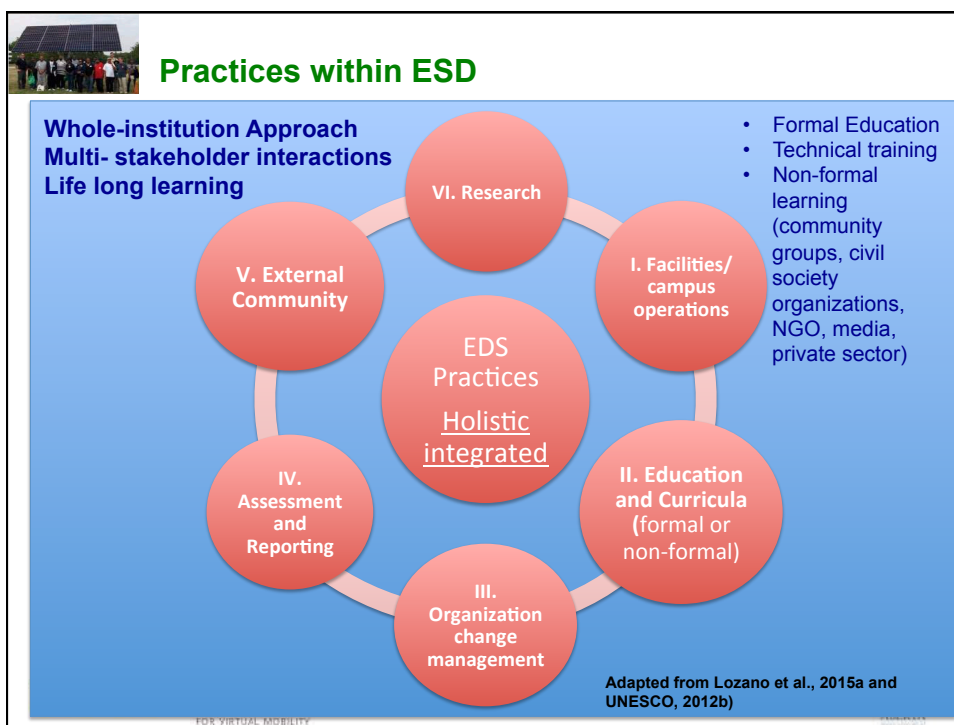


Most practices have been applied at schools or Higher Education (HEI) Institutions, and main literature/research arise from application at HEI, but can be applied in other contexts.



These slides is to guide your study and concepts organization and to link you for further readings.





**Practices within ESD**

Reading: Lozano et al., 2015a

**I. Implementing facilities/Campus operations**

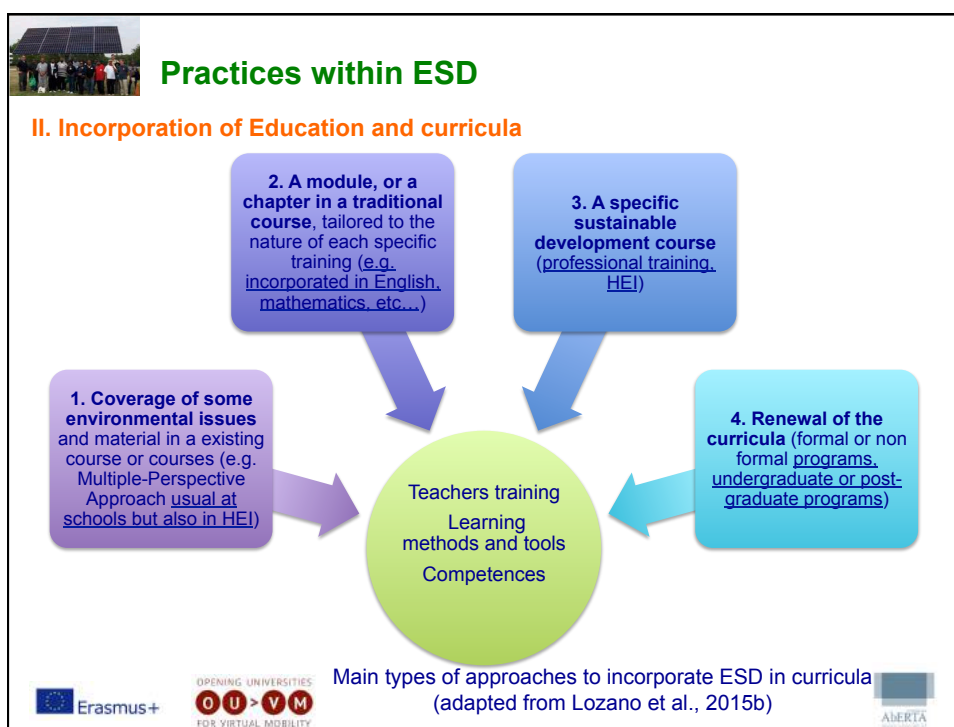
Possible and more usual measures and changes of the organization facilities towards sustainable development, like for example:

- ✓ Waste bins and recycling;
- ✓ Energy efficiency/reduce greenhouse gases (GHG) emissions;
- ✓ Water and wastewater management;
- ✓ Equality and diversity;
- ✓ Access/facilities for disabled people;
- ✓ Fair trade product promotion;
- ✓ Green procurement;
- ✓ Local produced food;
- ✓ Transport
- ✓ Well being and health.

Supporting tools:

- Environmental management tools
- Life Cycle Analysis
- Sustainable buildings
- Green Schools flag
- .....

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**Practices within ESD**

**II. Incorporation of Education and curricula**

Reading: UNESCO, 2012a (Compl.) UNESCO, 2012c (Compl.)


The **Multiple-Perspective Approach** is usually used for primary and secondary schools teaching and learning, to promote interdisciplinary and intercultural competencies to address ESD (UNESCO, 2012).

- ✓ Scientific perspective way of knowing about the world around us
- ✓ Historical perspective of changes in the world over time
- ✓ Geographic perspective of events, problems and issues take on different complexities
- ✓ Human rights perspective
- ✓ Gender equality perspective
- ✓ Values perspective of individuals, cultures and countries
- ✓ Cultural diversity perspective
- ✓ Sustainability perspective – Sustainability balances environmental, social, and economic concerns, and focuses on the future to assure the well-being of upcoming generations.

As school source of innovation in teaching and learning than as simply another subject to add to the curriculum.

Pleas visit UNESCO site multimedia education programme (available educational resources) - <http://www.unesco.org/education/tlsf/...>

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## Practices within sustainable development


### II. Incorporation of Education and curricula

To develop the initiatives shown in previous slides, it is needed to:

- ✓ **Reorient and train teachers:** linking theory and practice, interdisciplinarity, transdisciplinary, informal learning, transformative learning, leadership approaches
- ✓ **Use of holistic, collaborative learning methods, approaches and tools** (problem based learning, Triple Bottom Line, life cycle analysis, games, on-line collaborative learning etc...)
- ✓ **Fulfill students learning outcomes and competences for ESD**

Readings:  
**Barth and Rieckmann, 2012**  
**Lozano and Lozano, 2014**  
**Amador et al., 2015**  
**Aktas et al., 2015**  
 Dlouha and Burandt, 2015 (compl.)






## Practices within sustainable development

### II. Incorporation of Education and curricula

Module/Course/program syllabuses' for ESD, should consider the following criteria to guarantee the link between theory and action and students competences and learning outcomes within ESD (Amador et al., 2015):

| CATEGORIES / LEVELS                    | DEFINITION  |
|--|---|
| <b>Principles (Theoretical level)</b>  | Philosophies, ideologies and principles underlying statements and decisions, expressed explicitly or easily inferred.   |
| <b>Pre-action (Pre-action level 0)</b> | Undertake analysis and develop skills in a progressive process. Intermediated category associated to the acquisition of knowledge, assuming often the form of causal scientific explanations.   |
| <b>Pre-action (Pre-action level 1)</b> | Prepare for action, outlining interventions, analyzing consequences. Shows a concern in understanding and clarifying communication and dialogue in social contexts, based in the view that a solid theoretical argumentation could inform and guide practical judgment. |
| <b>Praxis (Action level)</b>           | Development of student attitudes that permits them to fight for what they consider right, good and just.  |



## Practices within sustainable development

### II. Incorporating Education/curricula


key competences for ESD (Disterheft et al., 2013):

- (i) competences in foresighted thinking;
- (ii) competence in interdisciplinary work;
- (iii) competence in cosmopolitan perception; cross-cultural understanding and cooperation;
- (iv) participatory skills;
- (v) competence in planning and implementation;
- (vi) capacity for empathy, compassion and solidarity;
- (vii) competence in self-motivation and in motivating others;
- (viii) competence in distanced reflection on individual and cultural models



**Holistic approach, envisioning change and achieving transformation**

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## Practices within ESD


### III. Organizational change management

Besides training and education of human resources and physical changes, organizations have to incorporate sustainability into their systems and cultures (through values, visions, philosophies, policies, employee empowerment, and change management practices):

- ✓ Institutional framework (i.e. the organizations commitment): policies, vision, mission, SD office, and Declarations signed (commonly used in Schools, e.g. Eco-Schools, and HEI, e.g. COPERNICUS);
- ✓ Students, teachers, staff/employee awareness, empowerment and engagement practices;
- ✓ Change management practices, like hierarchy flow, top down or bottom up
- ✓ Internal change and innovation, change in mental models.

Readings:  
Lozano et al., 2015a  
Lozano et al., 2015b

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## Practices within ESD

**IV. Assessment and reporting:**

- ✓ SD assessment
- ✓ SD communication
- ✓ Environmental and sustainability reports
- ✓ Environmental or sustainability rankings (national or international in particular)

**Sustainability Reporting** is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development (GRI, 2011). The measurement is usually done through the use of performance indicators.

Readings:  
**Lozano et al., 2015a**  
 Ceulemans et al., 2015 (Compl.)










## Practices within ESD

**IV. Assessment and reporting**

There is a large number of tools to assess and rank sustainability on organizations, based on indicators, charts or surveys, like for example (adapted from Disterheft et al., 2012):

- ◇ GRI - Global Reporting Initiative Guidelines
- ◇ ISO 26000 Social responsibility (International Standardisation Organisation)
- ◇ ISO 9000 Quality Assurance
- ◇ ISO 14001 Environmental Management Systems
- ◇ ISO 14031 Environmental Performance Evaluation
- ◇ ISO 14063 Environmental communication
- ◇ EMAS Eco Management and Audit Scheme (Standardized management tool developed by the European Commission)
- ◇ Ecological Footprint survey
- ◇ Sustainability Report Card survey



## Practices within ESD

### IV. Assessment and reporting




There is also a large number of tools to assess and rank sustainability developed specific for HEI, like for example (adapted from Disterheft et al., 2012):


- ✧ STAUNCH – Sustainability tool for Auditing Universities Curricula in Higher Education
- STARS – Sustainability Tracking, Assessment & Rating System available at <https://stars.aashe.org/>
- ✧ GASU – Graphical Assessment of Sustainability in Universities tool
- ✧ CSAF – Campus Sustainability Assessment Framework
- ✧ AISHE – Auditing Instrument for Sustainability in Higher Education see

For primary and secondary school there are more specific labels and certification schemes, like **Eco-Schools**

- ◆ **Sustainability reporting is still an under developing issue in Educational institutions – but important for communication and benchmarking.**

Readings  
**Lozano et al., 2015a**  
 Ceulemans et al., 2015 (Comp.)  
 Disterheft et al., 2013 (Comp.)  
 Lozano, 2010 (STAUNCH Comp.)







## Practices within ESD

### V. External Community and Outreach

- ✓ Exchange of SD programmes and joint degrees with other HEIs (at Higher Education Institutions)
- ✓ Joint research
- ✓ SD partnerships (e.g. enterprises, non-governmental organisations, and governments, between educational institutions)
- ✓ Interdisciplinary SD networks (e.g. being part of a UN Regional Centre of Expertise (RCE))
- ✓ SD events open to the community
- ✓ Participatory, communication and engagement initiatives with all stakeholders

Readings:  
**Lozano et al., 2015a**  
 Müller-Christ et al. 2014 (Comp)






## Practices within ESD

Readings:  
Lozano et al., 2015a  
Karatzoglou, 2013 (Comp.)

### VI. Research

- ✓ Pedagogy, learning (transformative, innovative...), competences, changing teaching
- ✓ Holistic and systems thinking, transdisciplinarity;
- ✓ Displacing barriers from leadership to students and employees
- ✓ Community outreach and partnerships
- ✓ Stakeholder engagement and participation
- ✓ Case studies (Success cases of practices within ESD)
- ✓ Action research (for example in real learning environments)
- ✓ New knowledge and technologies
- ✓ Knowledge transfer and collaboration strategies between academia and practitioners.



## Practices within ESD

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