Competences for sustainable development

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Education 360°

Main concepts and ideas

- What is sustainability?
- What is sustainable development?

- What is education for sustainable development goals?

- What are the key competences for sustainability?

Sustainability and sustainable development

- "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
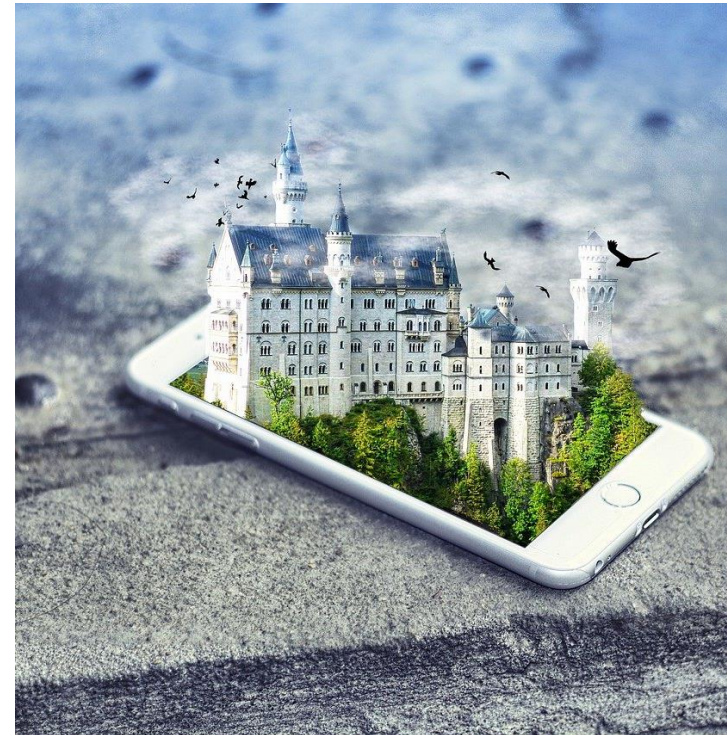 (UN World Commission on Environment and Development)

- Sustainability is associated with the pillars:
  - economic,
  - environmental,
  - social and cultural

UN (2015) Transforming our world: the 2030 Agenda for Sustainable Development

What do you know about Sustainable development goals?

Sustainable development goals (UN, 2015)

Sustainable development goals (UN, 2015)

The focus on 4 & 17

4. Quality education:
- Equal access to education, for all
- Improving literacy, numeracy and contemporary skills that lead to sustainalbe lifstyle, gender equality and cultural diversity

17. Technology.
- Cooperation on and access to science, technology and knowledge sharing;
- Dissemination of environmentally sound technologies
- Enhance the use of ICT

Education for sustainable development goals: the key competencies for sustainability

- A.Wiek, L.Withycombe, C.L.Redman (2011). Key competences in sustainability: a reference framework for academic program development

- Unesco (2017). Education for Sustainable development goals: learning objectives

The key competencies for sustainability

1. Systems-thinking competence
2. Anticipatory (Future thinking) competence
3. Normative competence
4. Strategic competence
5. Interpersonal competence

Resource: A.Wiek, L.Withycombe, C.L.Redman (2011).

The key competencies for sustainability

1. Systems-thinking competency
2. Anticipatory competency
3. Normative competency
4. Strategic competency
5. Collaboration competency
6. Critical thinking competency
7. Self-awareness competency
8. Integrated problem solving competency

Resource: UNESCO (2017), based on: de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

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1. Systems-thinking competency

- the abilities to recognize and understand relationships;
- to analyse complex systems;
- to think of how systems are embedded within different domains and different scales;
- and to deal with uncertainty.

de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

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2. Anticipatory competency

- the abilities to understand and evaluate multiple futures – possible, probable and desirable;
- to create one's own visions for the future;
- to apply the precautionary principle;
- to assess the consequences of actions; an

de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

3. Normative competency

- the abilities to understand and reflect on the norms and values that underlie one's actions;
- and to negotiate sustainability values, principles, goals, and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions.
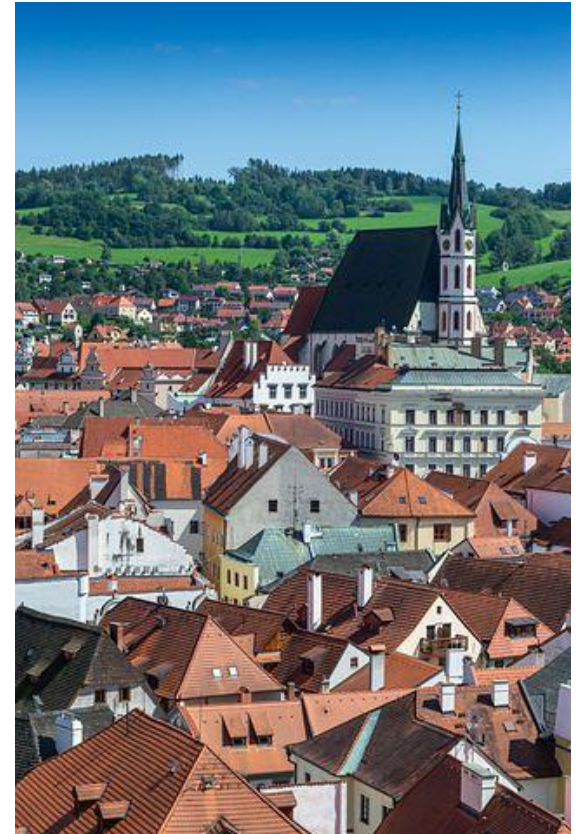
de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

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4. Strategic competency

- the abilities to collectively develop and implement innovative actions that further sustainability at the local level and further afield

de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

5. Collaboration competency

- the abilities to learn from others;
- to understand and respect the needs, perspectives and actions of others (empathy);
- to understand, relate to and be sensitive to others (empathic leadership);
- to deal with conflicts in a group;
- and to facilitate collaborative and participatory problem solving.

de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

6. Critical thinking competency

- the ability to question norms, practices and opinions;
- to reflect on own one's values, perceptions and actions;
- and to take a position in the sustainability discourse.

UNESCO (2017),
Based on: de Haan, 2010;
Rieckmann, 2012; Wiek et al., 2011.

7. Self-awareness competency

- the ability to reflect on one's own role in the local community and (global) society;
- to continually evaluate and further motivate one's actions;
- and to deal with one's feelings and desires.

UNESCO (2017), basedon: de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

8. Integrated problem solving competency

- the overarching ability to apply different problem-solving frameworks
  to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the above- mentioned competences.

UNESCO (2017), basedon: de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011.

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Development of sustainability competencies

- Various subjects – various tasks
- Analysing and discussing interdisciplinary topics and problems in different contexts;
- Organizing integrated lessons and tasks
- Selecting topics, related to real life situations

Education for sustainable development: pedagogical approach

5 pedagogic elements that cover a host of pedagogical approaches or methods to bring into the learning environment.

1. Critical reflection
2. Systemic thinking and analysis
3. Participatory learning
4. Thinking creatively for future scenarios
5. Collaborative learning

Resource: University of Plymouth. What is Education for sustainable development?

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Education for sustainable development: pedagogical approach

5 pedagogic elements to bring into the learning environment:

1. Critical reflection – including the more traditional lecture, but also newer approaches such as reflexive accounts, learning journals, and discussion groups.

2. Systemic thinking and analysis – the use of real-world case studies and critical incidents, project-based learning, stimulus activities, and the use of the campus as a learning resource

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Education for sustainable development: pedagogical approach

5 pedagogic elements to bring into the learning environment:

3. Participatory learning – with emphasis on group or peer learning, developing dialogue, experiential learning, action research/learning to act, and developing case studies with local community groups and business

4. Thinking creatively for future scenarios – by using role play, real-world inquiry, futures visioning, problem-based learning, and providing space for emergence.

Resource: University of Plymouth.

What is Education for sustainable development?

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Education for sustainable development: pedagogical approach

5 pedagogic elements to bring into the learning environment:

5. Collaborative learning – including contributions from guest speakers, work-based learning, interdisciplinary/ multidisciplinary working, and collaborative learning and co-inquiry.

Resource: University of Plymouth.
What is Education for sustainable development?

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Q for reflection

- How education for SD goals may be brought in your class?

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