

# SDG and Circular Competencies Changes for HE Lecturers

## TEACHING THE TEACHERS SDG's & CE

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**VIA in facts**  
 VIA University College is located in the Central region of Denmark.

- 20.000+ students
- 40+ degree programmes
- 8 campuses across the region

**Why?**  
 based on the 'VIA erhverv analyse 2018'<sup>3</sup> (students address specific demands to their future employers)

**"89%**

**of the students finds it important** if the company is sustainable. To the students, the five most important areas are:  
 1. The company works to create better quality work  
 2. focuses on the environment, 3. ensures good working conditions, 4. re-uses resources, and 5. inspire customers to choose sustainable solutions."

<sup>3</sup> (850 VIA students participated in the survey in 2018)

**What?**

- Teach the Teachers to teach CE & SDG's
- Transdisciplinary learning and teaching methods
  - New curricular educations and courses are developed
  - New cross-sector collaboration
  - New cross-sector research established

**Supported by?**

Financial support from the Executive Board at VIA. Aligned with and written into the overall VIA Strategy and Vision 2020-2030.

**How?**

The teaching course started as a bottom-up initiative instead of a top-down instruction with the aim to develop teaching modules. These modules address SDG's from specific backgrounds covering the broad range of professions within VIAs organization.

**Abstract**

In 2018-2021 VIA University College performs ambitious SDG and CE competency-courses for 102 professors, lecturers and leaders from a wide range of VIA's degree programs; Health, Design, Business, Teaching & Learning, Architectural Technology & Construction Management, Civil Engineering, etc. The development of future SDG competencies of the future students could be determinant for their capacity of dealing with the complex future SDG challenges. (Biberhofer, et al. 2019, Mulgan, 2014, UNESCO, 2017, Frisk & Larsson, (2011), Scharmer, (2014), Future Skills Report, 2018)

With the 17 world goals a common language across of countries, sectors and professions promotes cooperation on achieving common goals. We "Teach the Teachers SDG- across all our faculties" working cross-sectoral, creating new research and enhancing the development of competencies for social and sustainable development (CSD's) in HE's among students, staff and educators. The initiative is supported by the Executive Board of VIA and the National Hub for Circular Economy. Throughout the course, the teachers are inspired to rethink the concepts into their respective professions and to develop new teaching courses. The SDG competencies-courses are constructed in 7 layers. The poster presents: Contextualisation, methodology, framework, presentation of the developed competency course, the outcome and conclusions together with the future perspective.



**UN17' SDGs in education**

**17 goals**  
**169 targets**

**Who?**

- 102 lecturers
- from 21 educations
- 3x 5 days in 2018-2020



**Methodology? 5 steps**

The aim of the program is to reshape curricula in all sectors in VIA. But, as there is still very little empirical evidence for the implementation of ESD<sup>4</sup> in the classrooms, and what effects ESD has on student outcomes (competencies, knowledge and attitudes towards SD) the fundamental idea of the ESD-course is to make professors across sectors develop and implement SDG and CE competences through a holistic interdisciplinary perspective of content and learner-centered democratic teaching strategy in the educations. The program adapts the theory and methodologies from Hahn et al. (2014) on creating "Systemic Framework for the Analysis of Tensions in Corporate Sustainability" developing the paradox behavioural awareness through an individual, organizational and systemic understanding of the interdependence of both social, economic and environmental challenges in developing ESD's.

The course uses a wide variety of tools and strategic frameworks for developing a language of ESD and SDG<sup>5</sup> learning.

<sup>4</sup> ESD = Education for Sustainable Development  
<sup>5</sup> SDG = UN17's Sustainable Development Goals



**Framing the teaching 4 elements**

The program also uses the "Framework for Integrated sustainability research and problem-solving framework". (Wiek 2010) The framework is based on **four elements**: (1) analyzing the current problem constellation(s); (2) creating and crafting sustainability visions ("problem solved"); (3) exploring less desirable future scenarios that might become reality without interventions towards sustainability; (4) developing and testing strategies to transition from the current state to sustainable states without getting deflected towards undesirable pathways (critical intervention points) (adapted from: Wiek 2010)

**7 layers**

**The competency course**

Curriculum of the course consists of **7 layers**:

1. Presentations with external researchers, specialists and practitioners about circular economy, sustainable design, social entrepreneurship, theory and methods based on the latest theory and research within for the area.
2. Business visits and case studies.
3. Network-driven innovation focusing on own practice useable in their own practice.
4. Developing courses, including the 17 world goals.
5. Course exam and certificate. (Obligation to implement and document a new course, education within the 17 SDG's and CE)
6. Research guidance, implementation planning, curriculum development, experience forums.
7. Participation in Alumni Exchange Group

**8 skills**

**Addressing competencies**

**8 Sustainable key competencies** are addressed by the course (UNESCO 2017/ Rieckmann 2018)

- Systems thinking competency
- Anticipatory competency
- Normative competency
- Strategic competency
- Collaboration competency
- Critical thinking competency
- Self-awareness competency
- Integrated problem-solving competency

**Findings / Conclusion 3 needs**

If the HE's wish to implement a sustainable educational framework, research in ESD promotes to enhance the focus on personality development, thus enabling a person to cope with complexity, uncertainty, act upon own reflection and responsible, ethical decision-making. A "New Learning Culture" is characterised on the basis of **three needs**: (Barth, et al. 2007, Ostergaard, 2018, Bason, 2010, Manzini, 2016)

A: **Competence-orientation**: The focus of the learning processes should be on providing relevant key competencies to the students. This requires a normative defined competency framework, -like the 8 sustainable key competencies from UNESCO.

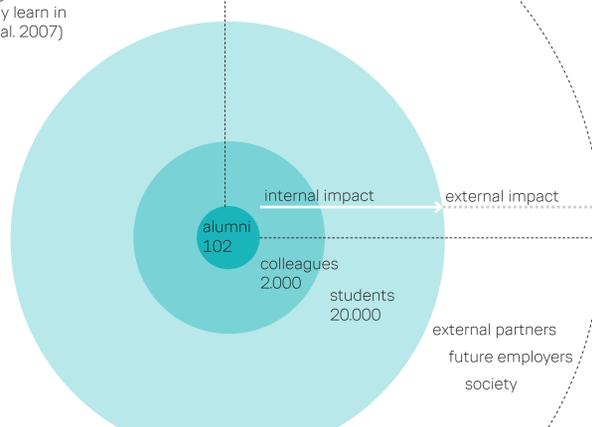
B: **Societal orientation**: Learning for SD is fundamentally a societal learning, which should take place in and with real case-collaborations and include systemic teaching and understanding.

C: **Individual and Emotional centring**: Individual learning is considered to be an asset in a societal orientation. In formal contexts of learning it changes the role of the teacher towards being a facilitator of learning with the students.

HE's needs to find ways of innovating new methods of interaction, which can integrate and use the competencies developed in informal learning settings, as students not only learn in formal settings. Some 70 % of all learning derives from informal learning. (Barth, et al. 2007)

**Future perspectives**

As next step, the concept is expanded within the organization. New courses for the management are scheduled in order to enhance and exchange knowledge. Furthermore, knowledge transfer will be offered externally as well as transdisciplinary research within the field conducted by collecting forces in our multi-disciplinary organization.



**Outcome**

Development of **sustainable key competencies** amongst lecturers and professors at VIA UC. 102 new ambassadors within the organisation, cross-disciplinary spread in the organisation, influence colleagues, management, students and business partners.

