



Curriculum Change - How do I transform my module or our program with sustainability-promoting learning approaches?

Workshop "Transforming our university teaching towards sustainability" 23.10.24

Mara Moos and Simon Zysset, WWF Switzerland

- Introduction round
 - Topics relevant to sustainability
 - Learning objectives and competencies
- I. **Work on your own course and exchange**
- Appropriate teaching/learning approaches
- II. **Work on your own course and exchange**
- Consideration of the students' perspective
 - Consideration of the perspective of practice partners
 - Integration level
- III. **Work on your own course**
- IV. **Questions and Closing round**



Work on your own course Step I



Study program:

Course/module:

Topics relevant to sustainability:

Learning objectives and competencies:

Appropriate teaching/learning approaches:

Consideration of the students' perspective:

Consideration of the perspective of practice partners:

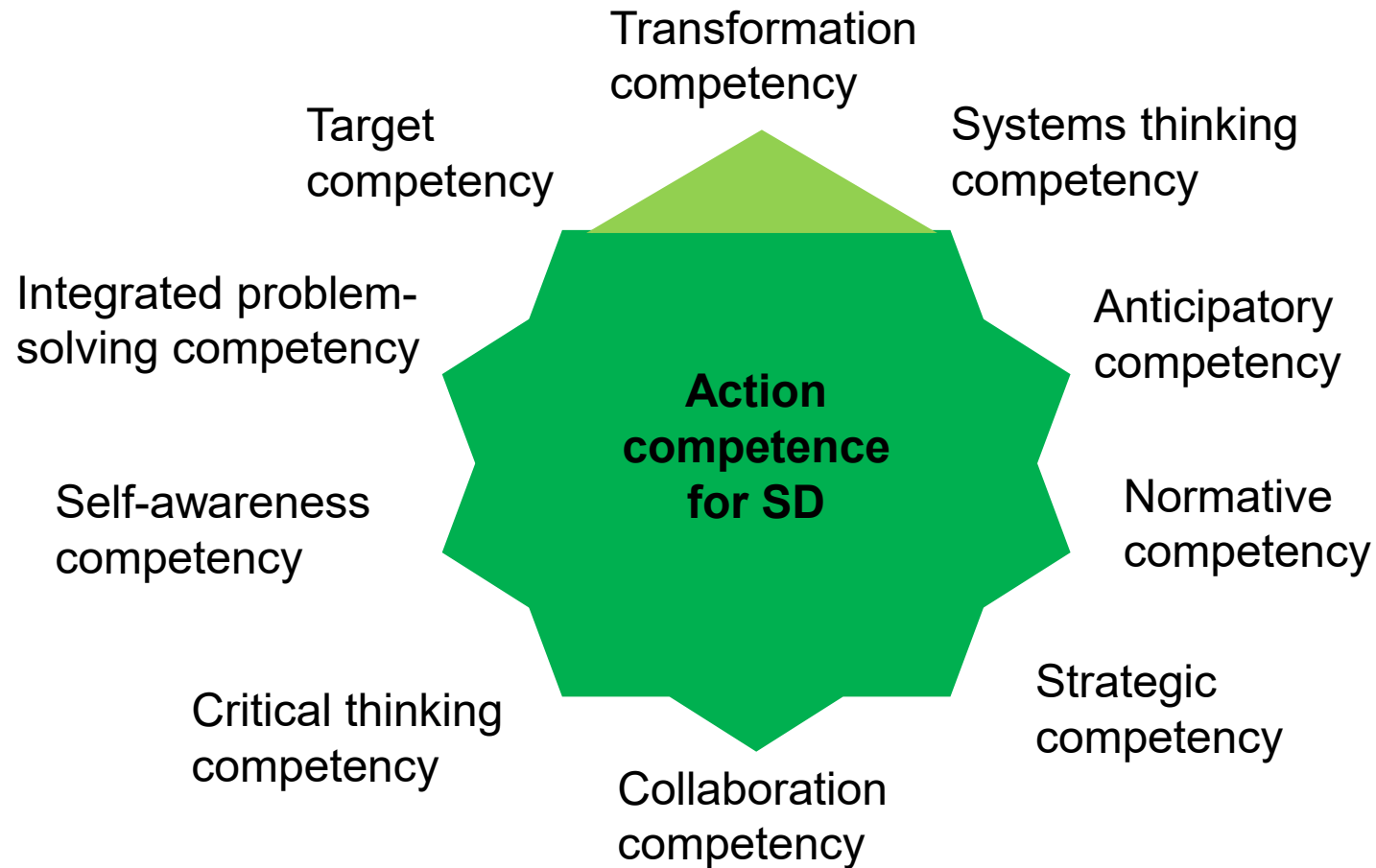
Scope and Integration level:

Sustainability relevance – select one or two topics



- Reference to one or more SDGs?
- Relevant for the future?
- Controversial topic or difficult dilemmas?
- Relevant for the professional future of students and the non-university world?

Select one or two key competencies



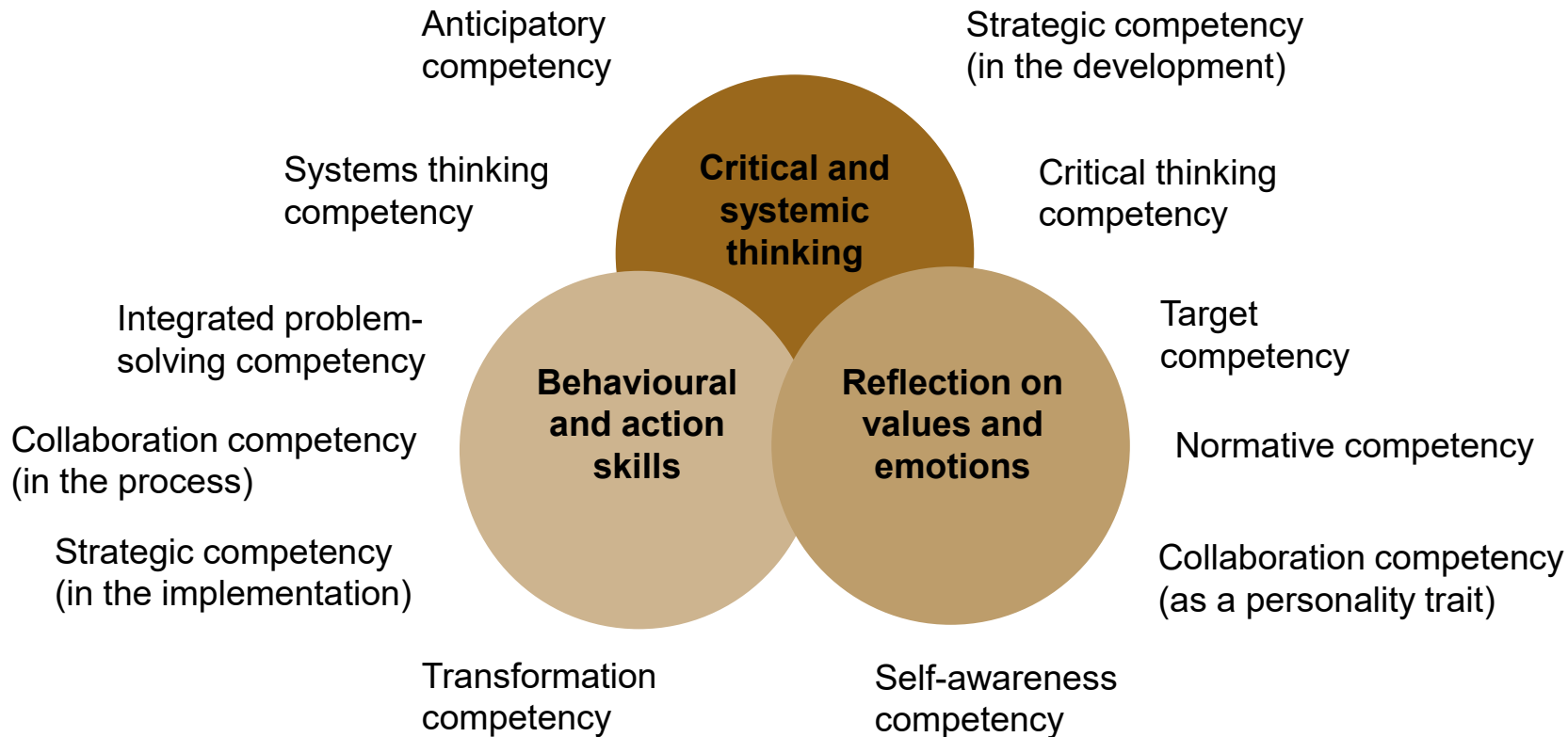
Source: UNESCO (2017): <https://unesdoc.unesco.org/ark:/48223/pf0000247444> and after Wülser et al. (2011): file:///C:/Users/szy/Downloads/Wuelser_et-al_2012_Framework.pdf

Work on your own course Step I



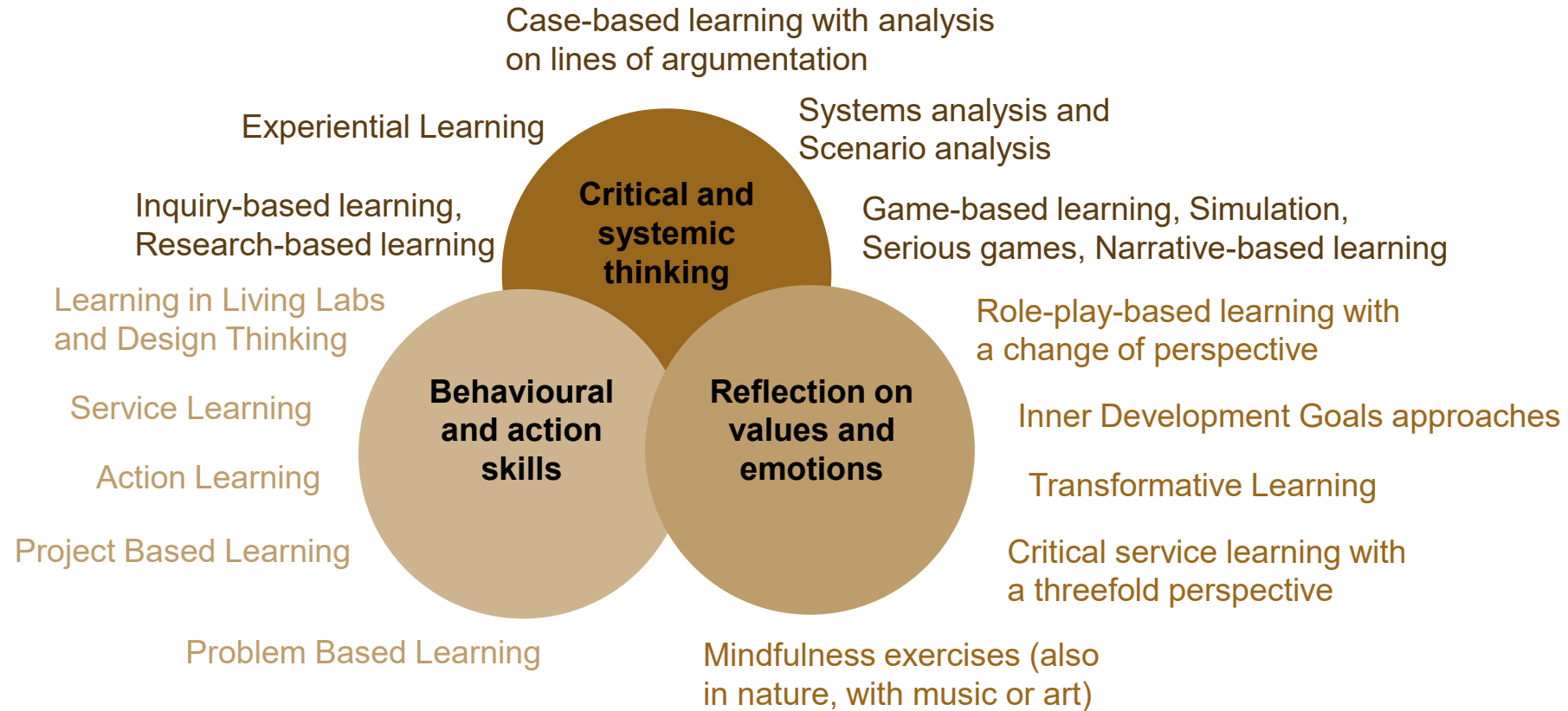
- Topics relevant to sustainability
- Learning objectives and competencies

Assignment to a competence area



To simplify matters, the ten key competencies can be assigned to three areas of skill. These correspond to the core of the UNESCO outcome dimensions (cognitive, socio-emotional, behavioral).

Select a teaching and learning approach



! Teaching and learning approaches often promote several areas of skill. The assignment only means that one learning approach is particularly suitable. !

Overview: Competencies and teaching and learning approaches



Teaching/learning approaches to promote critical and systemic thinking

Systems thinking competence
Anticipatory competence
Strategic competence
Critical thinking competence

1. Inquiry-based learning, Research-based learning
2. Experiential Learning
3. Case-based learning with analysis on lines of argumentation
4. Systems analysis and Scenario analysis
5. Game-based learning, Simulation, Serious games, Narrative-based learning

Teaching/learning approaches to promote reflection on values and emotions

Normative competence
Collaboration competence
Self-awareness competence
Target competence

1. Role-play-based learning with a change of perspective
2. Inner Development Goals approaches
3. Transformative Learning
4. Critical service learning with a threefold perspective
5. Mindfulness exercises (also in nature, with music or art)

Teaching/learning approaches to promote action skills for sustainable development

Strategic competence
Collaboration competence
Integrated problem-solving competence
Transformation competence

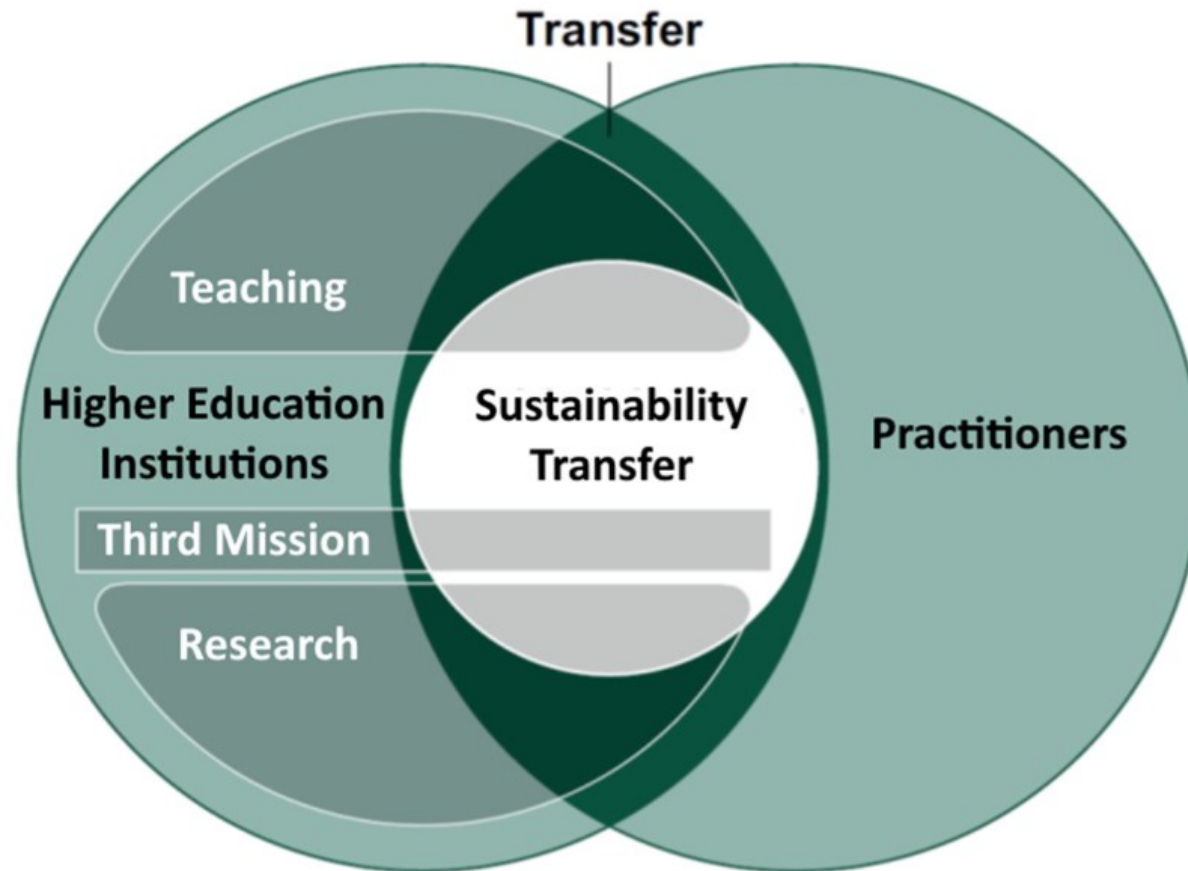
1. Problem Based Learning
2. Project Based Learning
3. Action Learning
4. Service Learning
5. Learning in Living Labs and Design Thinking (also for Start-up foundation, Socio-political engagement, and other real-world projects)

Work on your own course Step II



- Appropriate teaching/learning approaches

Transdisciplinarity: Third Mission and sustainability transfer

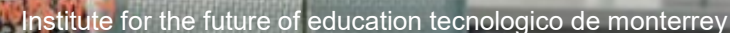




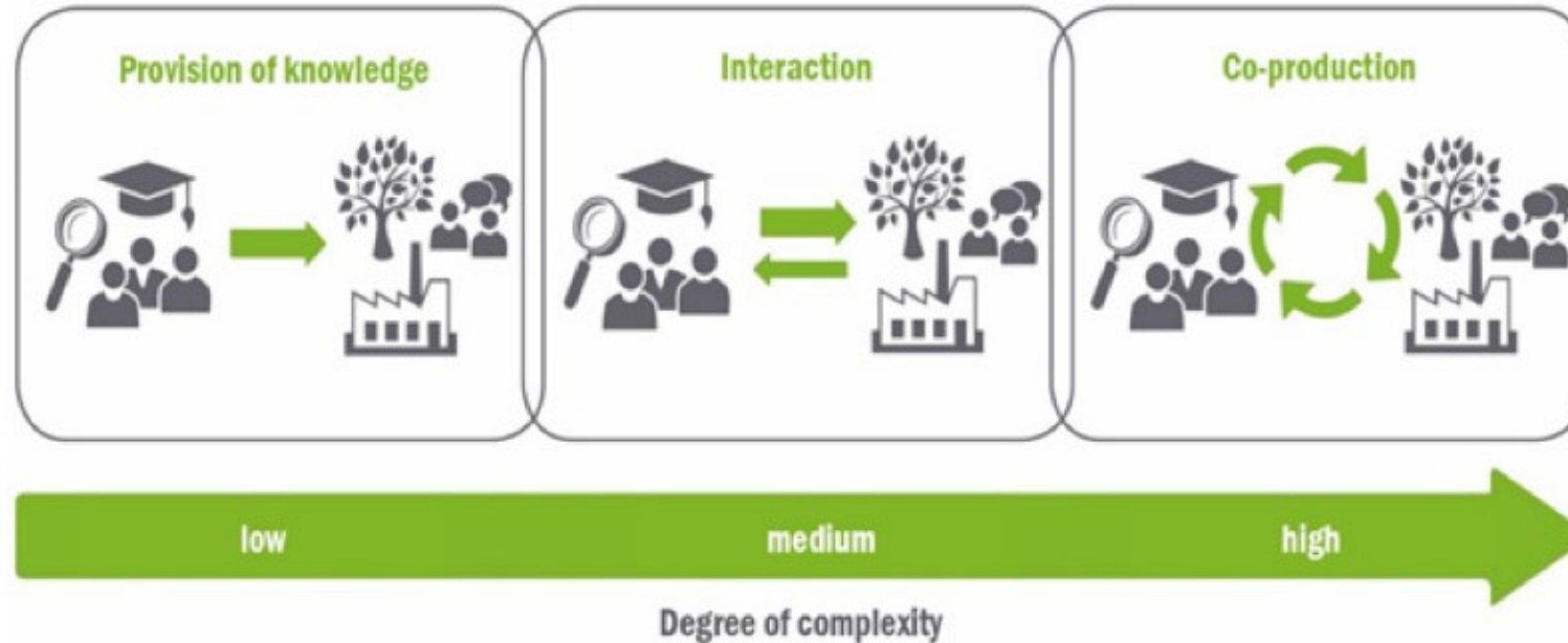
- Promotion of specialized knowledge and action skills
- Expansion of the personal network
- Reference for the CV
- Experience of self-efficacy and fun in learning together

- Practice-oriented teaching/learning methods
- Networking and joint learning with practice partners
- Practice-relevant research questions
- Image promotion

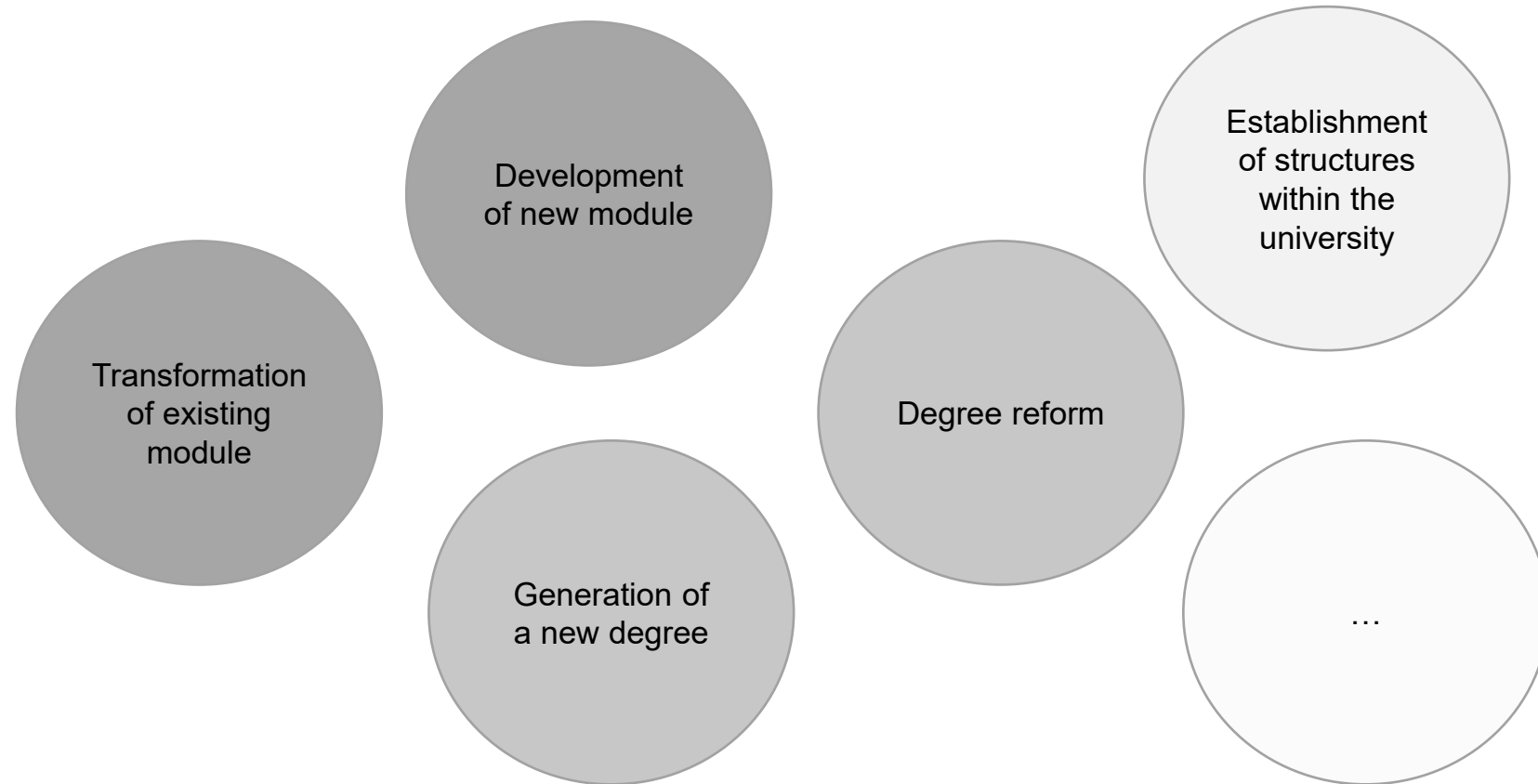
- Project support by the students
- New ideas and approaches by students
- Access to academic expertise
- Future volunteers or employees



Transdisciplinarity – complexity of collaboration



Transdisciplinarity – scope of project and transdisciplinarity



Transdisciplinarity – level of ESD-integration



No Integration: ESD is not integrated into the study programme

Add on: ESD is added to the existing study programme, without substantial change to the study programme

Weave Through: ESD is integrated into the existing study programme in a way that substantially changes the study programme. ESD is fully weaved through the whole content of the programme and is not viewed in an isolated way

Built in: ESD as a whole concept is totally implemented into a study programme. There is a reorientation of existing content and approaches to benefit sustainable development

<https://wiki.dg-hochsn.de/images/4/4c/Hoch-n-leitfaden-lehre-2020-neu.pdf>

Transdisciplinarity – duration of collaboration



Short term

Participating students in past module cycles

Competence evaluation by practice partners

Medium term

Student associations in the thematic or disciplinary field

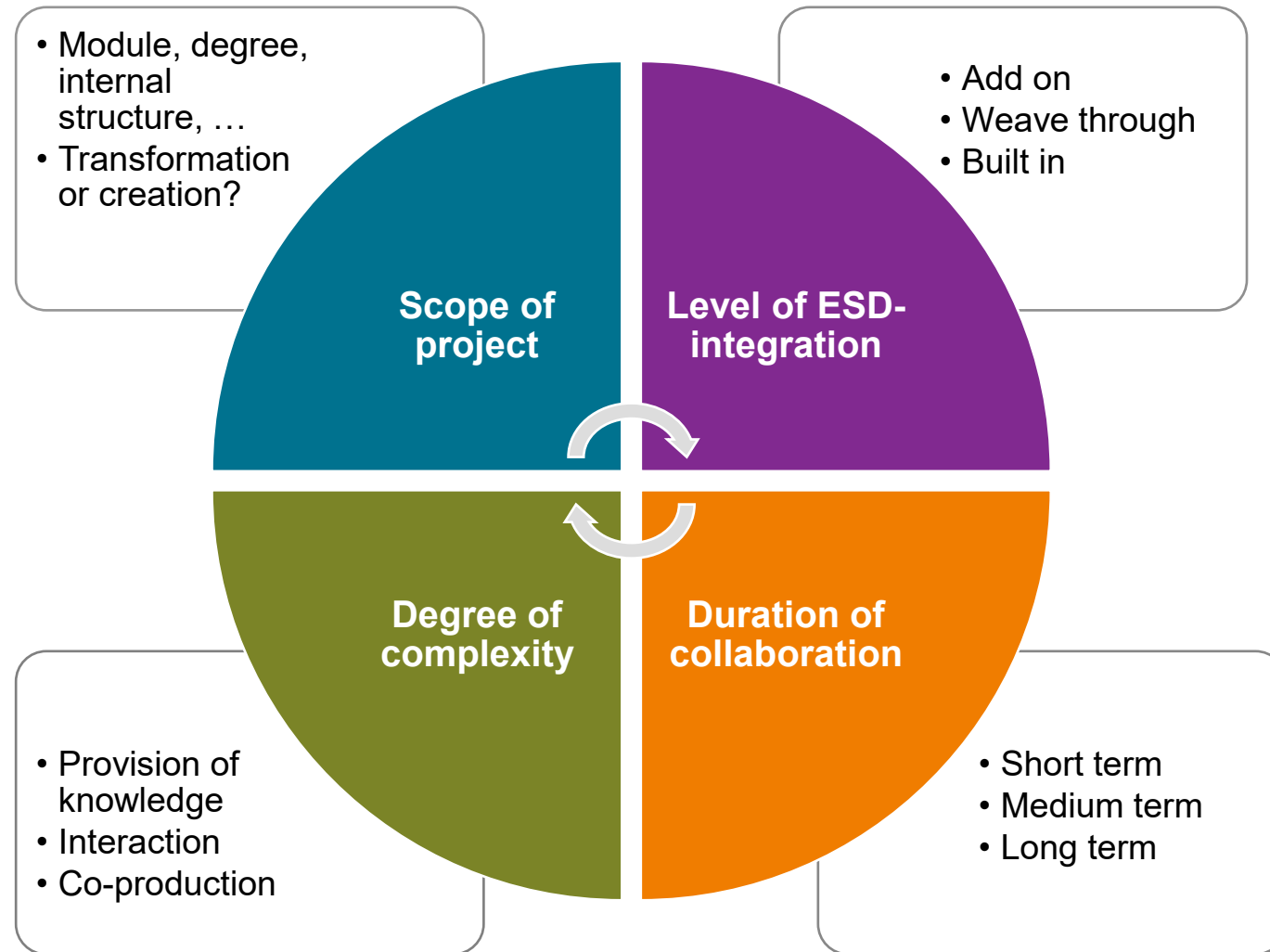
Guest lectures or co-development with practice partners

Long term

Establishment of a committee with student representatives

Establishment of a committee with practice partner representatives

Summary: Opportunities to involve students and practice partners at eye level



Work on your own course Step III



- Consideration of the students' perspective
- Consideration of the perspective of practice partners
- Scope and integration level

Collaboration with non-academic players

Established organizations can be helpful for longer-term cooperation with non-university stakeholders: they have a lot of experience in the practical field, can help develop projects and arrange suitable local practice partners. Some competent and committed organizations for cooperation:

- For collaboration with students: Focus Sustainability, VSS-UNES-USU or local student associations
- For collaboration with start-ups and sustainability initiatives: One Planet Lab, Impact Hub, ...
- For collaboration with civil society: ask us!



Resources: University transformation, teaching and Curriculum Change



DG HochN (2022): Sustainable Development by and with Universities: Recommendations for Action

Molitor H. et al. (2024): Designing future-oriented curricula. A practical guide for the curricular integration of higher education for sustainable development. Nachhaltigkeit an Brandenburger Hochschulen

Netzwerk n: Good-Practice-Sammlung (German)

SDSN (2020): Accelerating Education for the SDGs in Universities: A Guide for Universities, Colleges, and Tertiary and Higher Education Institutions

Sustainicum Collection: Teaching Resources



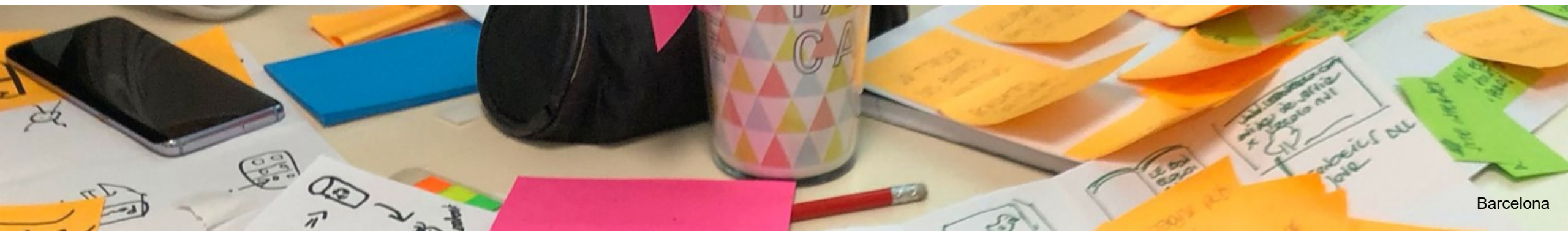
Learning in Living Labs (real-world laboratories)



“Living labs are open innovation ecosystems in real-life environments using iterative feedback processes throughout a lifecycle approach of an innovation to create sustainable impact. They focus on co-creation, rapid prototyping & testing and scaling-up innovations & businesses, providing (different types of) joint-value to the involved stakeholders. In this context, living labs operate as intermediaries/orchestrators among citizens, research organisations, companies and government agencies/levels.”

[Wikipedia](#)

- Living labs are the most far-reaching approach of the "Third Mission" and an excellent learning opportunity for students.
- In the interaction and co-design process, all learners, including lecturers and practice partners.
- A wide variety of competence-promoting approaches are possible: Research-based Learning, Problem-based Learning, Project Learning, Service Learning, ...



References to the Third Mission: Living Labs for sustainability



A few notable examples from other countries:

- [MIT Office of Sustainability](#)
- [UBC SEEDS Sustainability Program](#)
- [Université Grenoble Alpes - Campus en Transition](#)
- [Universität Hamburg - Kompetenzzentrum Nachhaltige Universität](#)
- [Universität Graz - RCE Graz-Styria \(Regional Centre of Expertise on Education for Sustainable Development\)](#)
- [University of Copenhagen - Sustainability Science Centre](#)
- [Lund University – LUCSUS](#)
- [University of Manchester](#)



Contact

If you have any questions or concerns,
please do not hesitate to contact us:

Simon.Zysset@wwf.ch

Project manager for
"Sustainability at Swiss Universities"

Mara.Moos@wwf.ch

Project assistant
"Sustainability at Swiss Universities"



