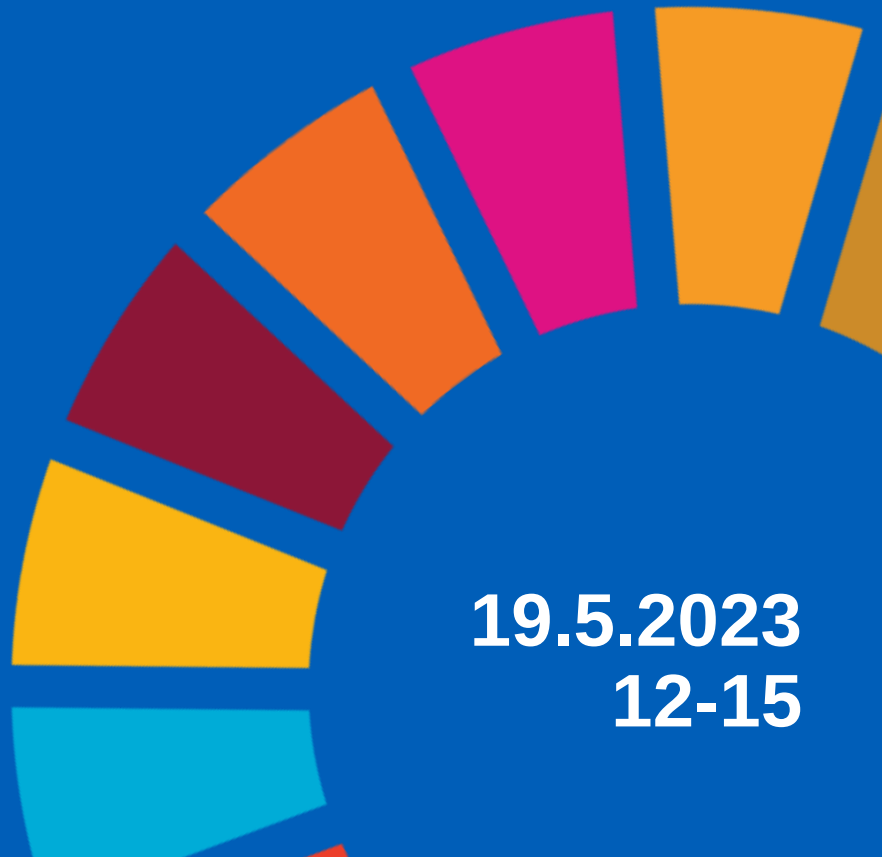
Sustainability in Teaching -course

Session 5



19.5.2023
12-15

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Outline and objectives

- Sharing and co-developing teaching methods in groups
- *Break*
- Introduction to assessment in sustainability education
- Introduction to values in sustainability
- *Short Break*
- Group discussion on values

Intended learning outcomes of the session

After this session you should be able to

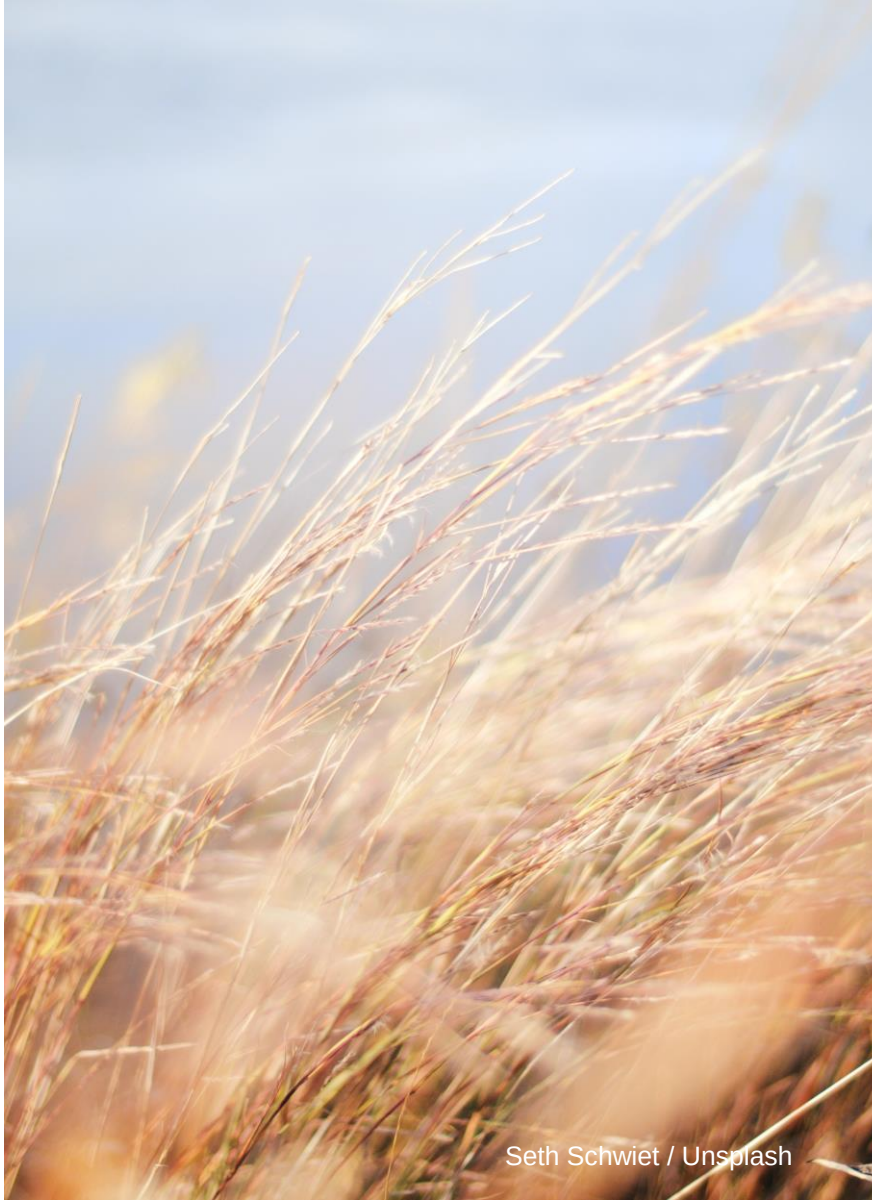
- Design and apply learning activities and assessment methods for sustainability learning
- Reflect on the role of values in teaching

Sulitest

- **What are your thoughts on the usefulness of this tool?**
- **In what kind of situations would you consider using it?**

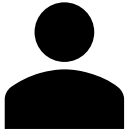
- *Write your spontaneous comments in the chat – 2 min!*

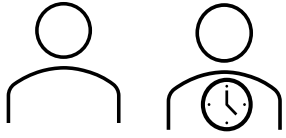
Group discussion



General instructions

1. Assigning roles: case owner, other members of the group (make sure that one other member takes care of the time management)





2. **Introducing an issue (5min):** Case owner presents the one slider

Case owner listens and makes notes on Flinga

3. **Question round (3min):** Others ask clarifying questions (ONLY questions, no other comments in this phase)

4. **Brainstorming (4min):** The group discusses how the issue can be addressed (the case owner listens)

5. **Reflection & suggestions (1min):** Each group member gives a short reflection or potential suggestion to the case owner

6. **Reflection and comments (2min):** The case owner reflects on the suggestions

Flinga: https://edu.flinga.fi/s/ELVJVQ8

Coaching method "*Intervision*": More-Than-Human Intervision - Re-imaginary (reimaginary.com)

Break

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Sustainability in teaching toolbox

- There is a recognized need to share experiences and co-create a toolbox for sustainability integration for Aalto teachers.
- Toolbox for teachers (version 1.0) has already been published. To further develop it, we would like to receive your feedback and participation.
- **Feedback on the content**: give feedback to us regarding the page. As a teacher, what is most relevant for you? What would be helpful for you and your colleagues?
- **Would you be happy to share your ideas for sustainability integration** for the whole Aalto teacher community? We may ask some of you to share your methods for others as well.
- Sustainability in Teaching | Aalto University
- Feedback and contact: meeri.karvinen@aalto.fi OR riikka.evans@aalto.fi

Assessment in sustainability education

What level is being assessed?

- Level: specific task, course, programme, graduate performance / capabilities

What is being assessed?

- Competencies / skills
- Knowledge & understanding
- Perceptions & attitudes & behavior

Who does the assessment?

- **Student:** reflective writings, scaled self-assessment, focus groups/interviews
- **Teacher:**
  - Observation: regular course work, performance observation (vocational education)
  - Test-based (Pre-defined set of criteria / right answers): conventional exam, concept mapping, scenario / case test (measuring how students apply competencies to solve a case that simulates real life)

BUT: Can everything be assessed? (e.g. motivation, empowerment and values)?

Redman 2020; see also Cébrian et al. 2019

Assessment triangulation:
combining multiple ways of assessment

Within and between the student and teacher -based assessment

- Using both, self-perceiving methods and observation/test-based methods
- For example:
    - Scaled self-assessment + reflective self-assessment (student)

  combined with
    - a test that measures learning against certain criteria (teacher)

→ The starting point is again the goal of the course/programme: what is the target in terms of sustainability? Deep knowhow and ability to apply OR to understand some basics and connections to sustainability?

Redman et al. 2020

All actions are influenced by worldviews and values

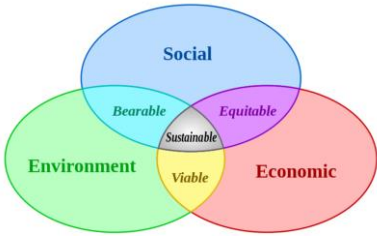
http://glancesideways.com/2012/10/progression-and-conceptual-adjustment/

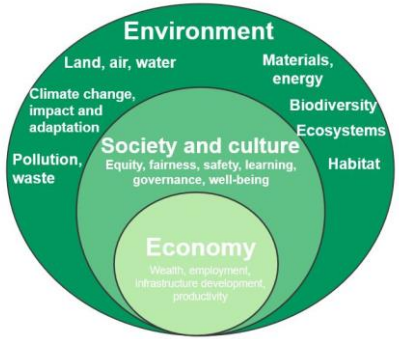
World as a resource
"Anthropocentric"

Interconnected

Regenerative

"Ecocentric"





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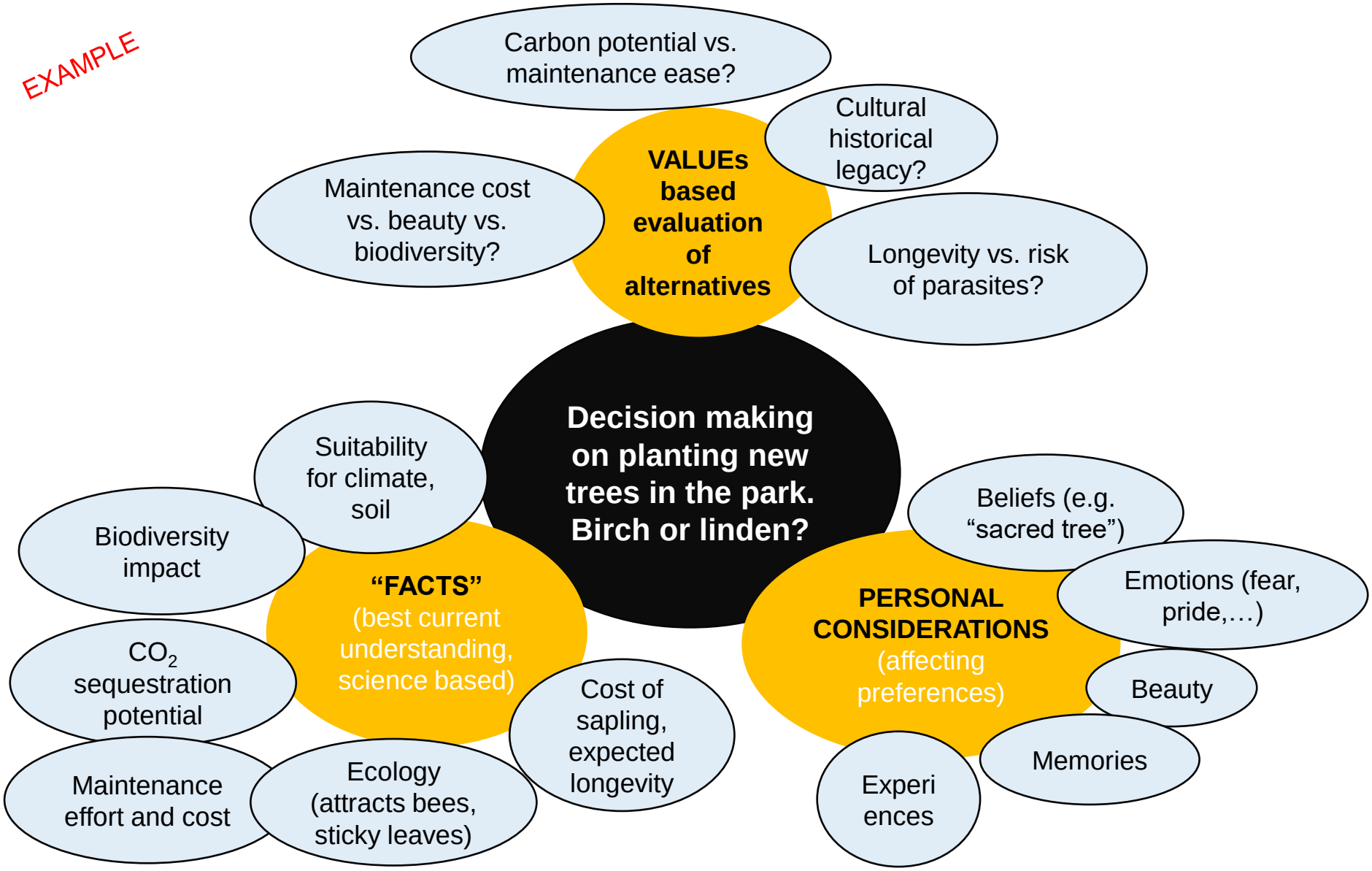

EXAMPLE
Carbon potential vs. maintenance ease?
Cultural historical legacy?
Maintenance cost vs. beauty vs. biodiversity?
VALUEs based evaluation of alternatives
Longevity vs. risk of parasites?
Decision making on planting new trees in the park. Birch or linden?
Suitability for climate, soil
Biodiversity impact
"FACTS" (best current understanding, science based)
CO_2 sequestration potential
Cost of sapling, expected longevity
Maintenance effort and cost
Ecology (attracts bees, sticky leaves)
Beliefs (e.g. "sacred tree")
Emotions (fear, pride,…)
PERSONAL CONSIDERATIONS (affecting preferences)
Beauty
Memories
Experi ences

Sustainability dilemmas

Energy production

health vs. climate vs. biodiversity vs. security

Forestry / bioproducts

biodiversity vs. climate

Sustainable economy

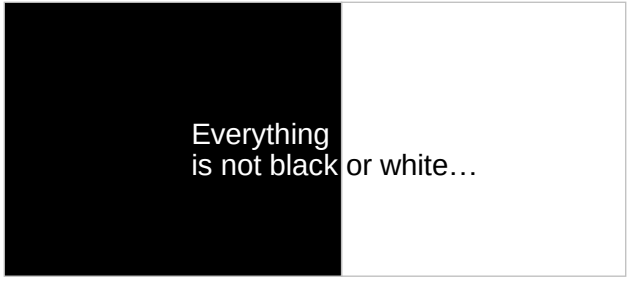
growth (decoupling) vs. degrowth

Land use

recreational space vs. (critical) infrastructure
indigenous land rights vs. critical minerals mining

Digitalization

affordability of services vs. accessibility
marginalized groups vs. energy consumption



Individual reflection

General guidelines:

Individual reflection, notes to Flinga

Time: 5 min

Topic:

What sustainability (/ethical) dilemmas can you identify

A. in your field of research
B. in the subject field of your teaching

Write down in Flinga:
https://edu.flinga.fi/s/E6JU2D9

Balancing with values in education

Values education as professional socialization

- Explicit and implicit
- Field specific
- Not fixed but on the move
- May include contradictions and cause cognitive dissonance
- Educator's values / educators as role models

Values education as subjectification

- Empowering students to be subjects
- Identifying own disposition through critical thinking and reflection
- Promoting conscious choices
- Liberal democracies, freedom

Inspired by Biesta 2014; Shephard & Egan 2018

***"…encouraging students to develop a disposition to explore their world critically is a form of values-education; and that this may be the only truly legitimate form of values-education open to higher education."* (Shephard et Egan 2018)**

Pedagogies related to values-education

Characteristics of pedagogies related to values

- Students as active participants
- Time for reflection

Examples

- Experiential learning: action, reflection
- Sustainability appraisal methods
- Visioning methods
- Participatory normative methods (e.g. negotiation methods)

Wiek et al. 2016; Shephard & Egan 2018

Examples of values-related learning outcomes

Student is able to:

- *Explore their own values, preferences and norms*
- *Identify value differences and trade-offs*
- *Construct visions that draw upon sustainability values and principles*
- *Assess the sustainability impact of one's job activities and envision a sustainable future for one's profession*

(Wiek et al. 2016)

Powerbreak 2 min

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Group discussion

General guidelines:

Breakout room: 10 + 10 min

- 20 min group discussion
- Designated groups
- Room chair: first one in alphabetics (father's first name)

Topic of discussion:

Based on the sustainability dilemmas identified earlier (10 min):

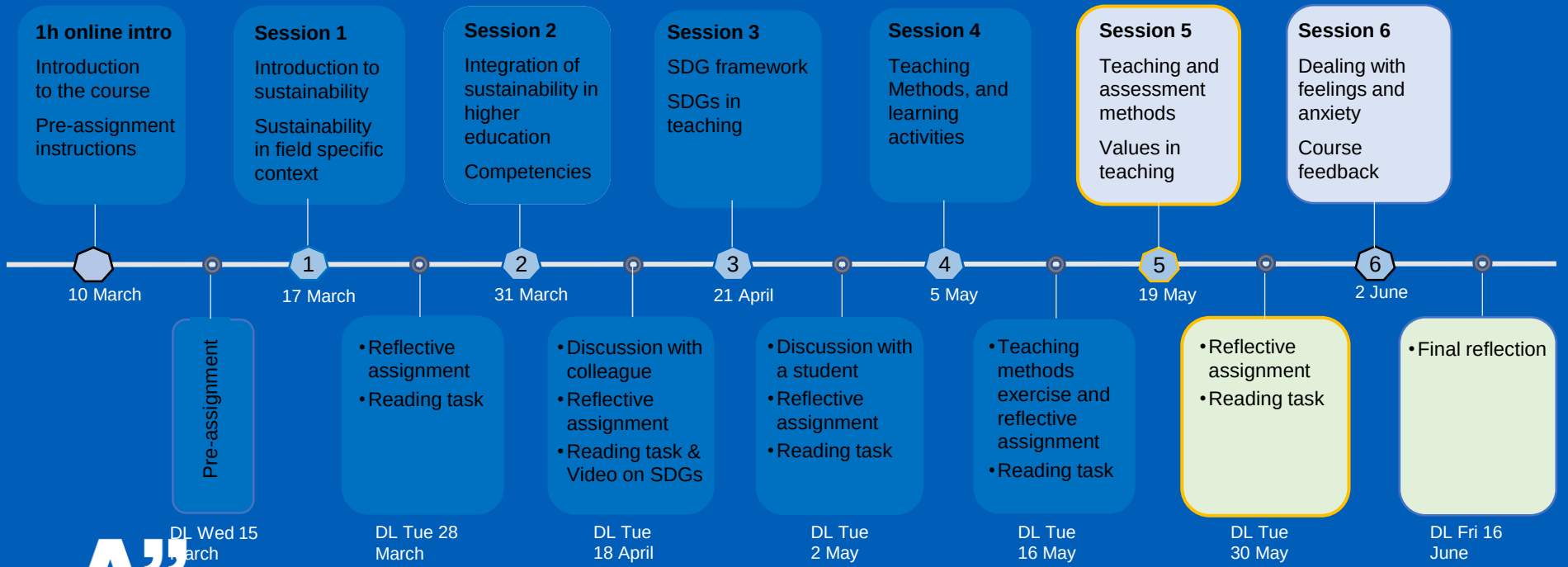
- What values do you recognize "hidden" or intentionally taught in your field and in your own teaching?

In Flinga (last 10 min)

- What challenges and/or good practices can you identify and share in addressing values in teaching?

https://edu.flinga.fi/s/E6JU2D9

Sessions and assignments



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Deadline of *Reflective assignments* always on Tuesday at 12.00 before the next session

Next session…

- Assignment 5: (dl Tue 30.5.)
- Testing a self-study tool in Webropol on integrating sustainability in courses
  - tool piloting → all feedback highly appreciated!
- Pondering with a colleague or individually (prepare to discuss): Questions on emotions in teaching (see MyCourses / Session 5)
- Reading task: Moser 2015

Our final session on Fri 2.6.2023 @ campus, Otakaari 1, U401

Literature

Biesta, G. (2014) *The beautiful risk of education* . London: Routledge.

Cebrián et al. (2019) Assessment of sustainability competencies: a literature review and future pathways for ESD research and practice. The Central European Review of Economics and Management
doi: http://dx.doi.org/10.29015/cerem.664

Redman et al (2020) Current practice of assessing students' sustainability competencies: a review of tools. *Sustain Sci* **16,** 117–135 (2021). https://doi.org/10.1007/s11625-020-00855-1

Rieckmann, M. (2018). Learning to transform the world: key competencies in ESD

Schinkel, A. (2009) Justifying Compulsory Environmental Education in Liberal Democracies. Journal of Philosophy of Education Vol. 43, No 4, 2009.

Shephard, K. & Egan, T. (2018) Higher Education for Professional and Civic Values: A critical reflection and analysis. Sustainability 10, 4442.

Wiek A, Bernstein M, Foley R, Cohen M, Forrest N, Kuzdas C, Kay B, Withycombe Keeler L (2016) Operationalising competencies in higher education for sustainable development. In: Barth M, Michelsen G, Rieckmann M, Thomas I (eds) 2016 Handbook of higher education for sustainable development. Routledge, London, pp 241–260.

How to teach value-related issues?

At what level is sustainability value laden?

- Is sustainability an issue to which students can freely choose to commit or not? Or is it like honesty and democracy, to which we can expect students to be committed to? (Shephard et al 201x)

Emancipatory approach as a solution

- Kasvatusfilosofiasta: We can and should teach sustainability but should not teach certain solutions as the right ones. (lähde)
- Emancipatory approach instead of instrumental (Rieckmann 2018)

Reflection: Where do I stand now?

Choose the option that best describes your course development process so far?

Elaborate your choice in 1-2 sentences in the chat.

Wait until requested to share your chat post.