

# *Sustainability in Teaching -course*

Session 4



Aalto-yliopisto  
Aalto-universitetet  
Aalto University



22.4.2022  
12:15-15:00

# Outline and objectives

- Reflections
- Teaching methods
  - Break*
- Teaching method examples
  - Break*
- Working on your course

## Intended learning outcomes of the session

After this (and next week's) session you should be able to

- Design learning activities for integration of sustainability relevant themes in courses
- Apply and evaluate teaching methods for sustainability integration in own course

# Timeline of the course (changes possible)

| Reading task for respective week        | Mon  | Tue  | Wed   | Thu   | Fri  |
|---|--|--|-------|-------|--|
| Tejedor et al                           | 11.-15.4. Discussion with student (book time slot in time) |  |       |       |  |
| Video                                   | 18.4.  | 19.4.<br>Homework<br>from session 3            | 20.4. | 21.4. | 22.4. <b>Session 4:</b><br>Teaching methods  |
| Reading task<br>Shephard &<br>Egan 2018 | 25.4.  | 26.4.  | 27.4. | 28.4. | 29.4.  |
|   | 2.5.   | 3.5.<br>SULITEST<br>Homework<br>from session 4 | 4.5.  | 5.5.  | 6.5. <b>Session 5:</b><br>Teaching and<br>assessment methods<br>Values in teaching |
| Reading task<br>(tbc)                   | 9.5.   | 10.5.  | 11.5. | 12.5. | 13.5.  |
|   | 16.5.  | 17.5.<br>Homework<br>from session 5            | 18.5. | 19.5. | 20.5. <b>Session 6:</b><br>Dealing with<br>emotions and anxiety<br>Closing         |
| Deadline of final reflection:           |  |  |       |       |  |

**COURSE  
SESSION,**  
at 12-15  
EET

**READING  
TASKS**  
(due before  
contact  
sessions)

**Home work  
assignment  
DLs**

**OTHER  
ASSIGNMENT**

# Meeting with a student - reflections

## General guidelines:

**Breakout rooms: 5+5 min**

- "Speed Dating"
- In pairs, 5 mins each
- 2 rounds

## Topic of discussion:

- **What was the key finding or insight from your discussion with the student?**
- **Share ONE key finding or insight with your pair.**

# Home assignments, student views

- Student view depends on who you ask:
  - Even contradictory views on the same course/programme (too little vs. too much / ignorance)
  - Students also see solutions needed in sustainable development in varying ways
- Most say sustainability is too superficially discussed (not feel competent in applying it)
- Sometimes overlapping content in different courses (e.g. on SDGs)
- Imbalance between the sustainability aspects (emphasis on environmental and/or social)

## **In addition, from earlier reflections:**

- Unintended outcomes of learning activities, e.g. guilt, anxiety among students

*"Honest teaching about where are the worst issues in our field right now, what has been done so far and what needs to be done"*

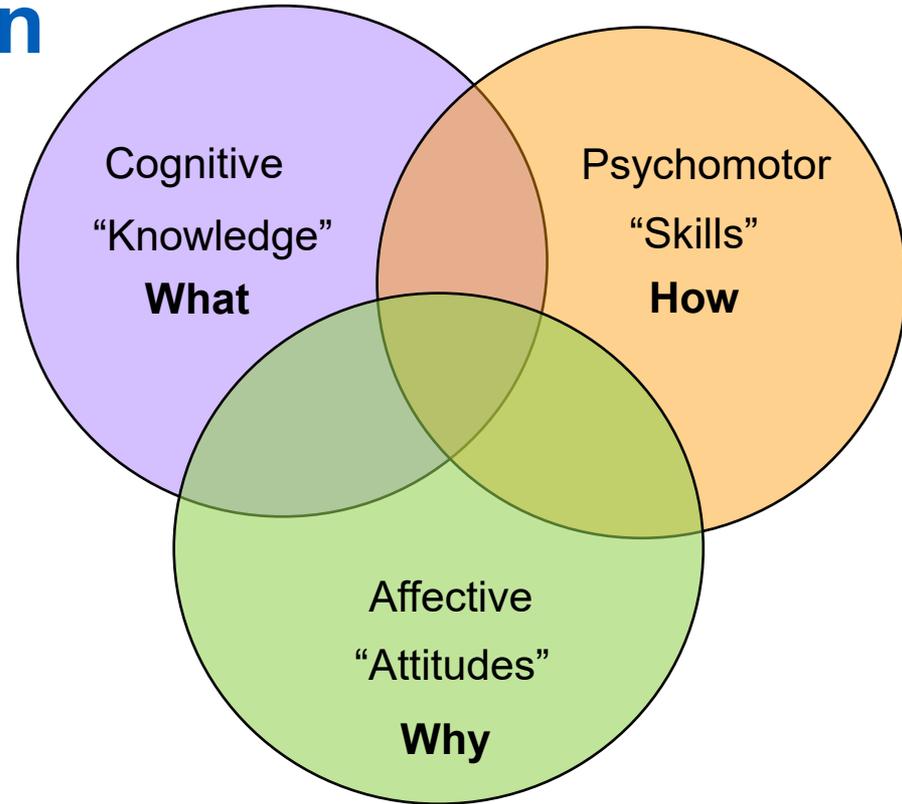
# Learning objectives in sustainability education

Sustainability education:  
Head, hands, heart (knowing, doing, being)

Sustainability competencies are:

- Interplay of knowledge, capacities and skills, motives and affective dispositions
- Developed by the learners themselves during action, on the basis of experience and reflection.

UNESCO 2017: Learning objectives for the SDGs



→ Teaching methods ought to develop students' thinking and recognition of own capabilities; A "linear continuum of development tasks" insufficient

(Savickas 2007; Sipos et al. 2008)

# Pedagogical approaches

- Supporting personal development
  - Supporting capability of connecting complex and interdisciplinary problem solving to sustainability challenges
- addressing individual as a whole

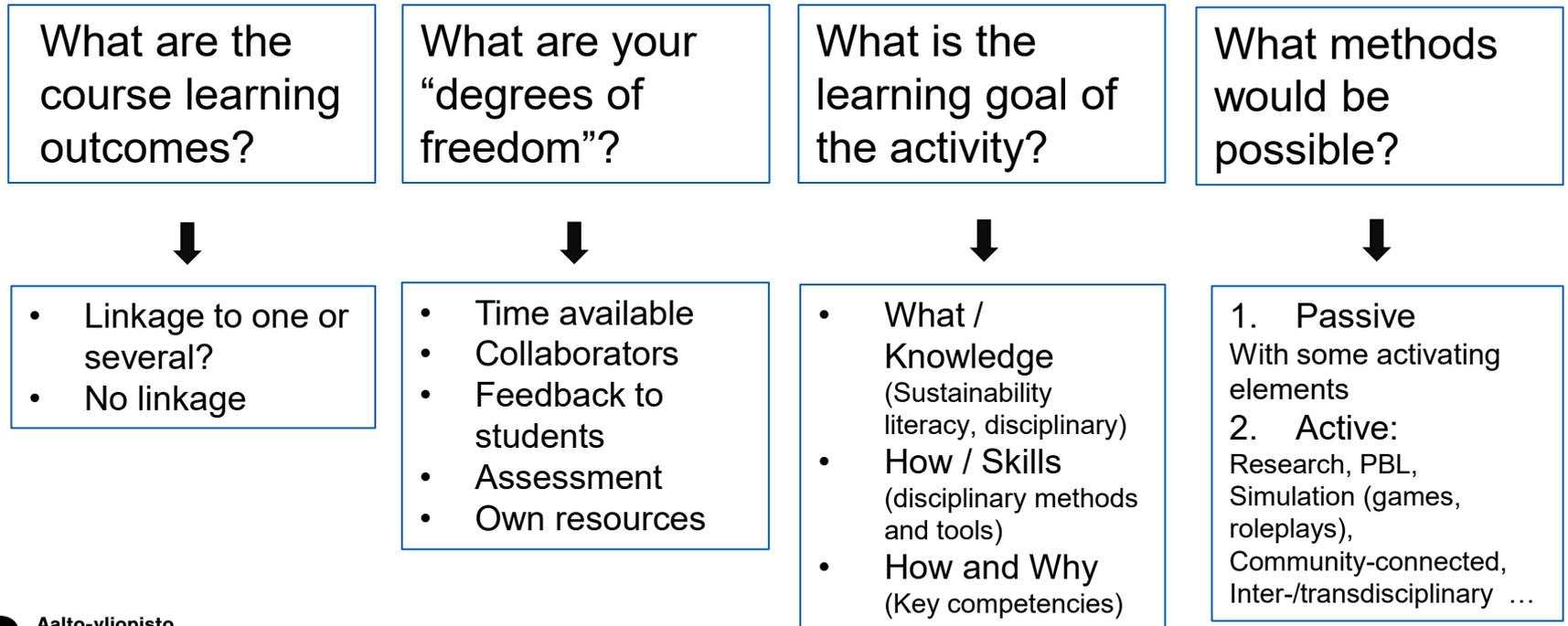
→ Combining different types of learning activities (methods) essential, if aiming at improving all the spheres, the “what, how and why”. This includes:

- Basic sustainability literacy; knowledge of “world current situation”
- Learning about disciplinary connections, solutions and impact assessment
- Active learning, participatory methods and engagement in communities
- Group and individual reflection (on context, tools and self)
- Research approach (critical evaluation of sources and knowledge, data analysis, drawing conclusions, argumentation)

# Developing a learning activity

*“The choice of pedagogical approach depends on the pedagogical and educational goals and the specifics of the situation (regarding students, teachers, or the learning environment)”*

(Lozano et al. 2019)



# Your turn: collecting learning experiences / teaching methods

## Step 1: In Flinga

→ Write down any **good** learning/teaching experiences for sustainability related competences or content, that you have had (either as learner or teacher): **What teaching method was used? Describe briefly.**

## Step 2: Still in the same Flinga

→ Let's organize our notes according to key competences (drag to appropriate field), choose the main competence addressed, or copy the note to multiple competences

→ Change the colour of your note according to (main) sustainability dimension addressed: **environmental (green)**, **economic (red)**, **social (orange)**, impossible to say (grey)

# *Break*

10 minutes



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# Examples of integration with varying pedagogical approaches

1. **Assignment contextualized in sustainability (pre-task video)**
2. **Using the SDGs to integrate sustainability content**
3. Sessions and exercises developed and piloted in Aalto
  - Qualitative LCA and expert panel to integrate sustainability
  - Exercise based on qualitative LCA and systems thinking
4. Applying ready-made teaching material: literacy test and (board) games

# Example 1: Assignment contextualized in sustainability

- Focus and learning objectives **outside** of sustainability scope
- Context of exercise / assignment around a chosen sustainability theme
- E.g. calculations,...

**A. Your pre-task: Video presentation by Tomi Kauppinen, Head of Aalto Online Learning**

# Example 2: SDGs in teaching

ELEC-E8124 Intelligent buildings (Jaakko Ketomäki)

1. Pre-lesson task: familiarization with SDGs, video in Youtube
2. Discussion: Which of the sustainability goals are connected to buildings? Why?
3. Joint collection of relevant sustainability entry points (box on the right)
4. Student group work: How can intelligency of the buildings support achieving the sustainability goals? (next slide)



## Ecological sustainability

Energy, materials, recycling

## Economic sustainability

Lifecycle, efficient energy and material use, maintenance of buildings

## Social and cultural sustainability

Cultural traditions of build environment, knowing of history, wellbeing of workers

# How can intelligency of the buildings support achieving the sustainability goals? Which of them?

(Group work for students)

## **Examples:**

### **Demand response**

Cut the energy peaks

### **Wise use of heat pumps**

Management of temperatures with low temperature heating networks

### **Utilisation rate**

Efficient use of buildings

### **Intermittent heating**

Adjustment of internal temperatures as a function of presense/no presense

### **Circular economy**

Wise use of materials

### **Reducing CO<sub>2</sub>**

Building phase, use phase and demolition

### **Waste management**

### **Optimizing traveling**

Also time saving and organizing life

# Examples of integration with varying pedagogical approaches

1. Assignment contextualized in sustainability (pre-task video)
2. Using the SDGs to integrate sustainability content
- 3. Sessions and exercises developed and piloted in Aalto**
  - **Qualitative LCA and expert panel to integrate sustainability**
  - **Exercise supporting systems thinking**
4. Applying ready-made teaching material
  - Sustainability literacy test and
  - Board games
  - Climate University courses

# Selected Aalto pilots 2021-22

| Course level & size           | Sustainability-related ILOs | Assessment                | Teaching activity developed   | Student engagement   | Approach   | Topic addressed  |
|-------------------------------|-----------------------------|---------------------------|---|--|--|--|
| BA 1 <sup>st</sup> year, ~200 | Yes                         | No                        | 90 min integrative and interactive lecture + stakeholder panel                                    | Passive with some group/pair discussions                       | Content: Basic knowledge on discipline-specific sustainability challenges & solutions                | Impact through qualitative LCA (circular economy)                |
| BA 1 <sup>st</sup> year, ~200 | No                          | Yes<br>Oral, in groups    | 90 min integrative and interactive lecture + group reflection as homework                         | Passive with some group/pair discussions & reflective homework | Content & competencies: Basic knowledge on discipline-specific sustainability challenges & solutions | Impact through qualitative LCA, emphasizing waste management     |
| MA, ~20                       | Yes                         | Yes<br>Also oral feedback | Sustainability-oriented group project + 45min lecture + group home assignment on systems thinking | Active, research-based, problem-solving                        | Competencies: systems and values thinking, interpersonal, problem solving                            | Project impact through sustainability science and LCA frameworks |
| MA, 10-20                     | Yes                         | Yes                       | Sustainability-oriented group project + debate  | Active, research-based, problem-solving                        | Competencies: systems and values thinking, interpersonal, intrapersonal                              | Competencies   |

**Elina Kähkönen,**  
University Lecturer  
A! Co-Educator Team /  
Aaltonaut

- Two examples of sustainability integration for mass courses



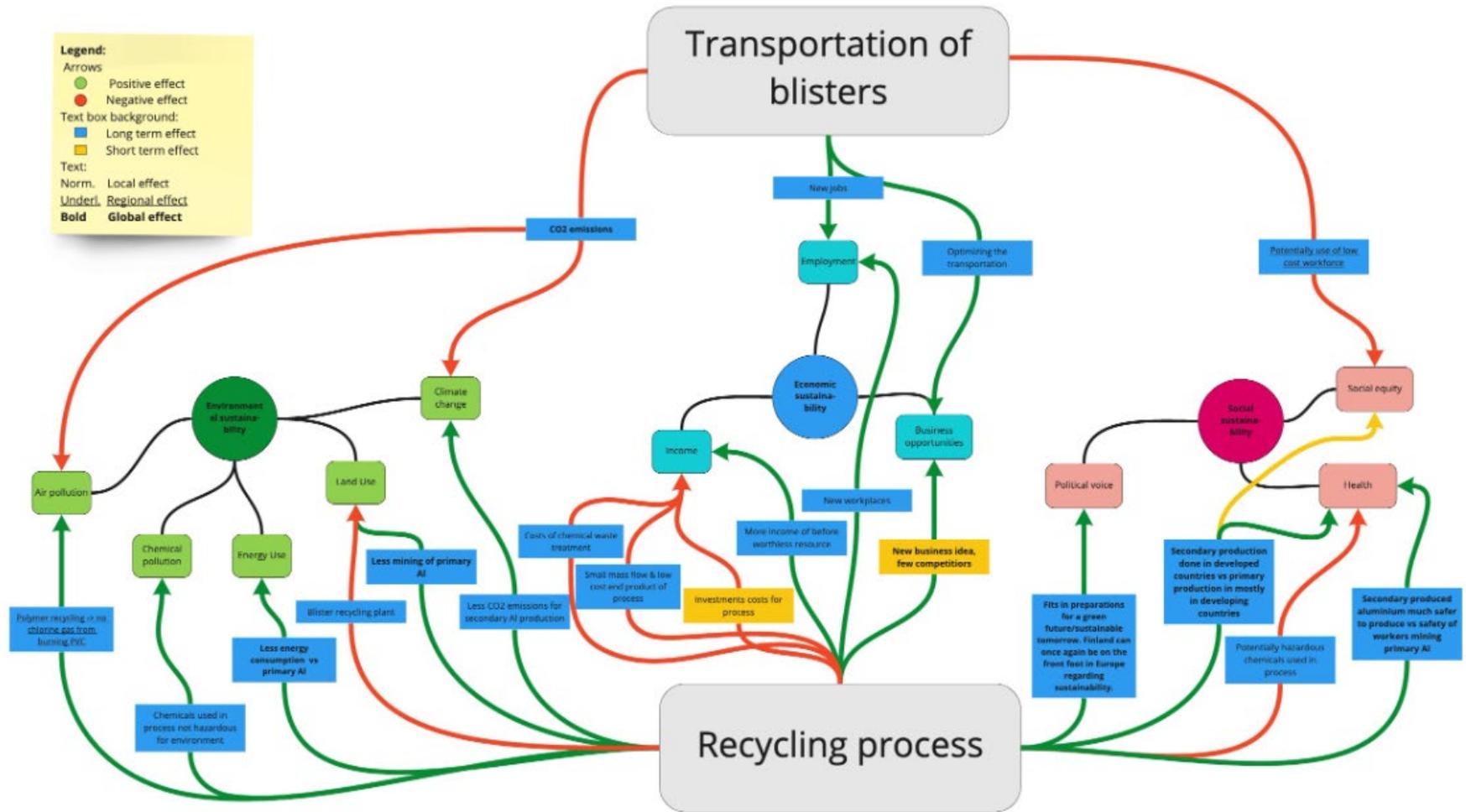


**INSTRUCTIONS:** This table can be used for inspiration and practical help when starting to draw your mind maps (or similar visualisations on your project's impact on sustainability). How to use the table? You can e.g. first simply identify and list the process life cycle phases that are applicable to your project (the first column). Then you can start mapping your project phases against the different sustainability aspects: does our project have any impact on the sustainability aspect in question - write the impact into the right cell. After mapping, start differentiating between positive and negative impacts (or neutral), long-term and short-term effects and finally, identifying connections and possible trade-offs between different sustainability aspects. You can e.g. use colours and other tools to indicate, if an impact is **positive** or **negative**, **long-term** or **short-term**, **local**, **regional** or **global**.

Use your imagination!

Remember that these various sustainability aspects in the table are examples drawing from scientific research (PB and doughnut models) - you don't need to use them all! You can also get inspiration e.g. from the SDGs when identifying the sustainability impacts of your projects. However, be prepared to justify and elaborate on the impacts and the connections and trade-offs you identify and present in the visualisation. In this elaboration, it is recommendable to use at least some existing framework or model of classifying the concept of sustainability.

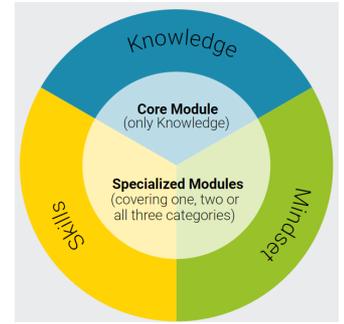
| Process phases (following "basic" product life cycle)  | Dimension of sustainability                        |                        |              |                           |                       |                                     |                     |        |          |                        |                          |        |  |        |               |           |         |                     |                   |                   |                 |        |
|--|--|------------------------|--------------|---------------------------|-----------------------|-------------------------------------|---------------------|--------|----------|------------------------|--------------------------|--------|--|--------|---------------|-----------|---------|---------------------|-------------------|-------------------|-----------------|--------|
|  | Ecological (according to the Planetary Boundaries) |                        |              |                           |                       |                                     |                     |        | Economic |                        |                          |        | Social (according to the Doughnut model) |        |               |           |         |                     |                   |                   |                 |        |
|  | Land use/ conversion                               | Climate change/ Energy | Biodiversity | Chemical or air pollution | Freshwater withdrawal | N / P loading Biogeo-chemical flows | Ocean acidification | Other? | Income   | Business opportunities | Employment / decent work | Other? | Gender equality                          | Health | Social equity | Education | Housing | Energy, Food, Water | Other basic needs | Peace and justice | Political voice | Other? |
| Resource acquisition                                   |  |                        |              |                           |                       |                                     |                     |        |          |                        |                          |        |  |        |               |           |         |                     |                   |                   |                 |        |
| Transport  |  |                        |              |                           |                       |                                     |                     |        |          |                        |                          |        |  |        |               |           |         |                     |                   |                   |                 |        |
| Processing   |  |                        |              |                           |                       |                                     |                     |        |          |                        |                          |        |  |        |               |           |         |                     |                   |                   |                 |        |
| Use phase (e.g. by business sector, user behavior ...) |  |                        |              |                           |                       |                                     |                     |        |          |                        |                          |        |  |        |               |           |         |                     |                   |                   |                 |        |
| End of use / recycling                                 |  |                        |              |                           |                       |                                     |                     |        |          |                        |                          |        |  |        |               |           |         |                     |                   |                   |                 |        |
| Other?   |  |                        |              |                           |                       |                                     |                     |        |          |                        |                          |        |  |        |               |           |         |                     |                   |                   |                 |        |



# Examples of integration with varying pedagogical approaches

1. Assignment contextualized in sustainability (pre-task video)
2. Using the SDGs to integrate sustainability content
3. Sessions and exercises developed and piloted in Aalto
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  - Exercise supporting systems thinking
- 4. Applying ready-made teaching material**
  - **Sustainability literacy test and**
  - **Board games**
  - **Climate University courses**

# Sustainability Literacy Test



## Background

- **Since 2013 (after Rio+20)**
- **Co-creation of questions**
- **Almost 50 countries**
- **> 430 universities**
- **> 45000 students**

## About

- **30 international questions** (randomly drawn from a large pool of questions)
- **Additional set of 10-20 questions**
  - **SDGs, national questions ...**
- **Multiple-choice**
- **Educative:** right answer with references provided after answering

# Sulitest pros and cons

- Ready-made questions addressing sustainability from many aspects
- Increases students' awareness
- Inspires creating various types of assignments around it
- Reference data from thousands of other students
- Possibility of conducting research with it
- Free to use for universities
- Takes time to familiarize with it
- Students need to register in order to take the test
- May be difficult to link the wide-ranging topics with own subject area
- Questions cannot be chosen by teacher, but are randomly drawn to each test session
  - Comparison between test sessions difficult for the same reason

# Board games in sustainability education

**Based on flipped classroom  
and active learning**

**Improve sustainability  
competencies:**

Strategic, system's, values thinking  
Inter-/intrapersonal competencies

**Include varying topics:**

Climate change / fact knowledge

Polarity thinking

Debating / argumentation

Critical minerals

Tragedy of the commons

Ecosystem dynamics

SDGs

....

Boardgames we have in Aalto:



# Dilemma, played as a part of course work (3-step flipped classroom)

2,5 days structure with pre-assignments, game seminar and follow-up task

## PROs

- Ready-made, but editable material and learning outcomes make it easy to start designing your teaching
- Easy to add content you wish to emphasize / relevant to your field
- Possibility to embed the game platform (Snowflake) in MyCourses makes it smooth for students to use
- Students found it engaging, educative and fun way to learn

## CONs

- Takes time to familiarize with the concept and the material
- Snowflake is a startup – access to the material is behind licenses



**Invitation:**  
**After work game  
exploration  
Fri 6.5. at 16->  
A Blanc/Taproom**

# Summary: ready-made material

## There is plenty of ready-made (online) games and other teaching material

- If you know some good ones, please share your sources and experiences!
- Always some effort needs to be put on learning and evaluating the material

## Other ready-made material:

- [En-ROADS \(climateinteractive.org\)](https://climateinteractive.org)
- [Climate Puzzle - D-mat](#)
- [Climate university \(see below\)](#)

Bachelor's level



CIRCULAR.NOW



CLIMATE.NOW

AALTO  
PHYS-E0580



SUSTAINABLE.NOW

Master's level



SYSTEMSCHANGENOW

AALTO  
MS-E2136



SOLUTIONS.NOW



LEADERSHIP FOR  
SUSTAINABLE CHANGE

Additional



CLIMATECOMMS.NOW



STATISTICAL TOOLS  
FOR CLIMATE AND  
ATMOSPHERIC SCIENCE



LUKIOLAISEN  
ILMASTO.NYT

# *Break*



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# Small group discussion

## General guidelines:

## Topic of discussion:

### Breakout room: 20 min

- Field specific group of three
- Room chair: First in alphabetic (first name)
- *Complement Flinga based on your discussion*
- Be prepared for a joint discussion (10 min)

### As a group

- Choose one method (from Flinga or examples) that you discuss in further detail (see also Meeri's slide).
- What kind of learning goals (what, how, why) does it support?
- What are the pros and cons of the method for you as teacher?
- What feedback mechanisms could be involved?

# **Homework: Work on either 1A or 1B**

**1A:** Describe one teaching method / learning activity aiming at advancing learning of sustainability competencies or sustainability related content *that you have (successfully) used in your teaching before*. Be as precise as possible. Explicate, what was the aim of the activity and how was it concretely designed (f2f, online, timing, instructions, equipment,...).

Reflect on it, e.g. how could you develop it further, for what kind of situations could you recommend this exercise, are there any critical points, etc.

**1B:** Based on the previous session, design one teaching activity for sustainability integration (sustainability competencies or sustainability related content) for your own course. Be as precise as possible. Explicate, what is the aim of the activity and how would you concretely design it (f2f /online, timing, preparations, instructions, equipment,...).

**Both tasks:** Apart from your individual submission, summarize your description into one .ppt-slide, which you share in the MyCourses Discussion forum. Make sure someone from “outside” understands your method. The submission in the Discussion Forum are visible for everyone. Comment / ask a question concerning the posted one-slider of at least one peer.



# Next session in two weeks...

## 1. Assignment 4 (dl 3.5.)

- a) Description + reflection of existing teaching method /learning activity learning

**OR**

- b) Designing a new teaching activity for your course

**AND**

- Share with others as one .ppt-slide

## 2. Take the Sulitest, dl 5.5.

## 3. Reading task: Shephard & Egan 2018

# Literature

*Karvinen et al.: Sustainability literacy and engineering: Experiences from a literacy test as a teaching and assessment tool in Nordic universities (2017). 45th Annual Conference of the European Society for Engineering Education, SEFI 2017.*

[https://www.sefi.be/wp-content/uploads/SEFI\\_2017\\_PROCEEDINGS.pdf](https://www.sefi.be/wp-content/uploads/SEFI_2017_PROCEEDINGS.pdf)

*Lozano et al. (2019): Teaching Sustainability in European Higher Education Institutions: Assessing the Connections between Competences and Pedagogical Approaches. Sustainability 2019, 11(6), 1602; <https://doi.org/10.3390/su11061602>*

*Savickas, M. L. (1997). Career adaptability: An integrative construct for life-span, life-space theory. The Career Development Quarterly, 45(3), 247–259. <https://doi.org/10.1002/j.2161-0045.1997.tb00469.x>*

*Segalàs, J, Ferrer-Balas D, Svanström M, Lundqvist U, and Mulder, KF (2009), What has to be learnt for sustainability? A comparison of bachelor engineering education competences at three European universities, Sustainability Science, 4(1), 17.*

*Sipos, Y., Battisti, B., & Grimm, K. (2008). Achieving transformative sustainability learning: engaging head, hands and heart. International journal of sustainability in higher education. <https://doi.org/10.1108/14676370810842193>*

*Tejedor, G.; Segalàs, J.; Barrón, Á.; Fernández-Morilla, M.; Fuertes, M.T.; Ruiz-Morales, J.; Gutiérrez, I.; García-González, E.; Aramburuzabala, P.; Hernández, À. Didactic Strategies to Promote Competencies in Sustainability. Sustainability 2019, 11, 2086. <https://doi.org/10.3390/su11072086>*

*UNESCO (2017): [Education for Sustainable Development Goals: learning objectives; 2017 \(unesco.de\)](https://www.unesco.org/en/education/sustainable-development-goals)*

# Course alignment check

|       | Teaching method | Learning activity | Assessment (scale, who assesses, formative/summative assessment, emphasis on the final grade ...) | Feedback to students (who provides feedback, feedback on the process or the end product ...) | Feedback to the teacher |
|-------|-----------------|-------------------|---|--|-------------------------|
| ILO 1 |                 |                   |   |  |                         |
| ILO 2 |                 |                   |   |  |                         |
| ILO 3 |                 |                   |   |  |                         |
| ILO 4 |                 |                   |   |  |                         |
| ILO 5 |                 |                   |   |  |                         |
| ILO 6 |                 |                   |   |  |                         |
|       |                 |                   |   |  |                         |

# 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 – 3 min!*

# Two ways to approach sustainability in teaching (from session 2)

## Solution focused approach

Focuses on field specific sustainability solutions.

Analysis of the impacts of providing services or products. (e.g. life cycle analysis, SDG based analysis)

## Systemic change approach

Focuses on transition management.

Applies transdisciplinary approach

**These two approaches should interact, and graduates need competencies on both approaches.**

# Timeline for the course - March

| Reading task for respective week     | Mon   | Tue       | Wed                               | Thu   | Fri  |
|--------------------------------------|---|-----------|-----------------------------------|---|--|
|                                      | <b>1</b><br>Pre-assignment<br>(questionnaire) | <b>2</b>  | <b>3</b>                          | <b>4</b><br>Reading task:<br>Heinberg<br>2010 | <b>5</b><br><b>Session 1:</b><br>Intro to sust. &<br>Sust.in field<br>specific context |
| Wals et al 2014 OR own choice        | <b>8</b>                                      | <b>9</b>  | <b>10</b><br>Log (from session 1) | <b>11</b>                                     | <b>12</b><br><b>Session 2:</b><br>Competences  |
| Wiek et al 2011                      | <b>15</b>                                     | <b>16</b> | <b>17</b><br>Log (from session 2) | <b>18</b>                                     | <b>19</b><br><b>Session 3:</b><br>Learning outcomes                                    |
|                                      | Discussion with colleague                     |           | Interim feedback                  |   |  |
| Tejedor et al 2019<br>Video (10 min) | <b>22</b>                                     | <b>23</b> | <b>24</b><br>Log (from session 3) | <b>25</b>                                     | <b>26</b><br><b>Session 4:</b><br>Teaching methods                                     |
|                                      | Sulitest                                      |           |                                   |   |  |
|                                      | <b>29</b>                                     | <b>30</b> | <b>31</b>                         | Easter break – no session                     |  |

**COURSE SESSION,**  
at 12-15  
EET

**READING TASKS**  
(due  
before  
contact  
sessions)

**LEARNING LOG  
DLs**

**OTHER ASSIGNMENT**

# Timeline for the course - April

| Reading task for respective week             | Mon   | Tue | Wed                        | Thu | Fri   |
|--|---|-----|----------------------------|-----|---|
|  | 29  | 30  | 31                         | 1   | 2   |
| Redman (2020)<br>Optional:<br>Cebrián (2019) | 5   | 6   | 7<br>Log (from session 4)  | 8   | 9<br><b>Session 5:</b><br>Teaching methods and assessment |
| Reading task                                 | 12  | 13  | 14<br>Log (from session 5) | 15  | 16<br><b>Session 6:</b><br>Values<br>Emotions             |
|  | Coffee break discussion with colleague, book time slot in advance |     |                            |     |   |
|  | 19  | 20  | 21                         | 22  | 23<br>Log (from session 6)                                |
|  | 26  | 27  | 28                         | 29  | 30  |

**COURSE SESSION,**  
at 12-15  
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**READING TASKS**  
(due before contact sessions)

**LEARNING LOG DLs**

**OTHER ASSIGNMENT**

# Learning domains, sustainability education & pedagogy 1/2

**Starting point:  
Good quality  
higher education**

**Teaching:** Socio-constructivist  
**Learning:** Deep / active  
**Assessment:** Formative / qualitative  
**Impact:** Personal development

## Approaches of sustainability education



**Increasing integration of all psychological & learning domains**  
Through reflective practices, active learning and social engagement

## Pedagogical / didactic approaches

# Learning domains, sustainability education & pedagogy 2/2

Good quality higher education

**Teaching:** Socio-constructivist  
**Learning:** Deep / active  
**Assessment:** Formative / qualitative  
**Impact:** Personal development

## Approaches of sustainability education

**Teaching:** ❖ Encounter  
**Learning:** ❖ Acknowledging  
**Impact:** ❖ Standalone solutions

FEEDS →

❖ Apply & create  
❖ Transformative  
❖ Systemic change

**Increasing integration of all psychological & learning domains**

Through reflective practices, active learning and social engagement

## Pedagogical / didactic approaches (\*specific to sustainability competencies)

- ❖ Lecturing
- ❖ Reading tasks
- ❖ Case presentation /studies
- ❖ Concept maps
- ❖ Contextualized assignments
- ❖ Flipped learning
- ❖ Inter-/transdisciplinary teamwork\*
- ❖ Jigsaw/ other interlinked teamwork\*
- ❖ Essays
- ❖ Simulations: games, role-play\*
- ❖ Place-based learning\*
- ❖ Problem-based & project-oriented learning\*
- ❖ Service learning / community-based learning\*
- ❖ Eco-justice and/or ecological education\*

## Higher education in general

|                    |                          |                         |
|--------------------|--------------------------|-------------------------|
| <b>Teaching:</b>   | ❖ Behaviorist            | ❖ Socio-constructivist  |
| <b>Learning:</b>   | ❖ Surface/passive        | ❖ Deep/active           |
| <b>Assessment:</b> | ❖ Summative/quantitative | ❖ Formative/qualitative |
| <b>Impact:</b>     | ❖ Instrumental           | ❖ Personal development  |

## Sustainability education

|                  |                        |                       |
|------------------|------------------------|-----------------------|
| <b>Teaching:</b> | ❖ Encounter            | ❖ Critical reflection |
| <b>Learning:</b> | ❖ Acknowledging        | ❖ Transformative      |
| <b>Impact:</b>   | ❖ Standalone solutions | ❖ Systemic change     |

**COGNITIVE**  
(knowledge/what)

**PSYCHOMOTOR**  
(skills/how)

**AFFECTIVE + CONATIVE**  
(attitude/why)

Application of **all** learning domains

## Pedagogical / didactic approaches

# Keskustelu, työskentely

Mihin kurssisi sijoittuu lähestymistapojen kirjossa? Oman ryhmän keskustelu, XX min, purku logiin

Opetusmenetelmät: mikä on mahdollinen omalla kurssilla (ja miksi?),

Learning: mistä opetusmenetelmästä haluaisit lisää tietoa (note to self)

Template, jonka kanssa työskennellään

ILO/what does the student learn?