

# Warm welcome to the EduSTA webinar!

Something in your mind during the presentations? Great!  
Please, write your questions and comments to the chat!

Please, keep your microphone on mute during the  
presentations.

Thank you!



Experiments of  
Enhancing  
Sustainability  
Competences and  
Futures Literacy in  
Teacher Education

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Presented by all  
EduSTA partners



Co-funded by  
the European Union



Academy for  
Sustainable Future Educators

# Programme

13.00–13.10 Welcome and the Introducing the Project, **Eveliina Asikainen**, Project Manager of EduSTA

## Part 1 Experiments in teacher education programmes

13.10 Catalonia – Promoting systems thinking and change agency in Initial Teacher Education, **Marta Guál Oliva**

13.30 Czech Republic – Reflexive Praxis as part of Teaching Vocational Subjects and Practice, **Jiří Votava**

13.50 Sweden – Sustainability Literacy: An Integral Part of Vocational Teachers Teaching Practice, **Helena Hellgren**

## Part 2 Experiments in Continuous Professional Development

14.10 The Netherlands – ESD Atelier for HEI teachers, **Elles Kazemier**

14.30 Finland – VET teachers as Sustainable Future Educators, **Hanna Teräs**

14.50 Closing remarks and discussion, Associate Professor **Liisa Uusimäki**, University of Gothenburg



# EduSTA Consortium



# EduSTA – Academy for Sustainable Future Educators

## Starting points

- **Competence based approach**
- Notion that the existing frameworks of teachers' competences for Education for Sustainable Development are quite abstract
- Using **Digital Open Badges** as a vehicle for recognition and documentation of competences allowing for recognition of prior learning and diverse learning pathways



2022

2023

2024

2025



WP2 Developing shared understanding and community



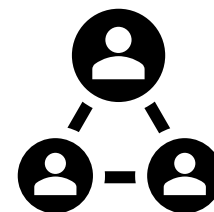
WP3 Developing educational contents and pedagogical guidelines



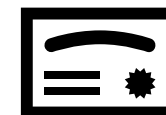
Result of WP2: Shared understanding on concepts, backgrounds, contexts

WP4 Digital badge driven learning pathways

Result: Outlines of course contents and pedagogics, enabling to meet the badge criteria



WP5 running pilots built on the products of WP3 and WP4



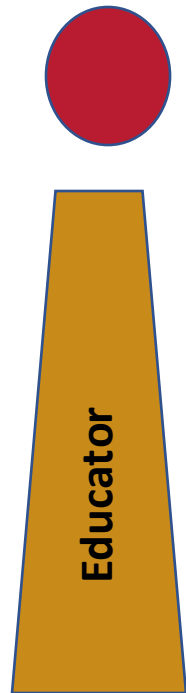
Result: Badge criteria, easily accessible materials and instructions



Revisiting the results and publishing the results openly



Results: ACADEMY = study offering intertwined with digital badge driven pathways  
Shared experiences in walking the talk of educating teachers for sustainable future



Educator

**Prior skills and knowledge**

**No prior skills or knowledge**

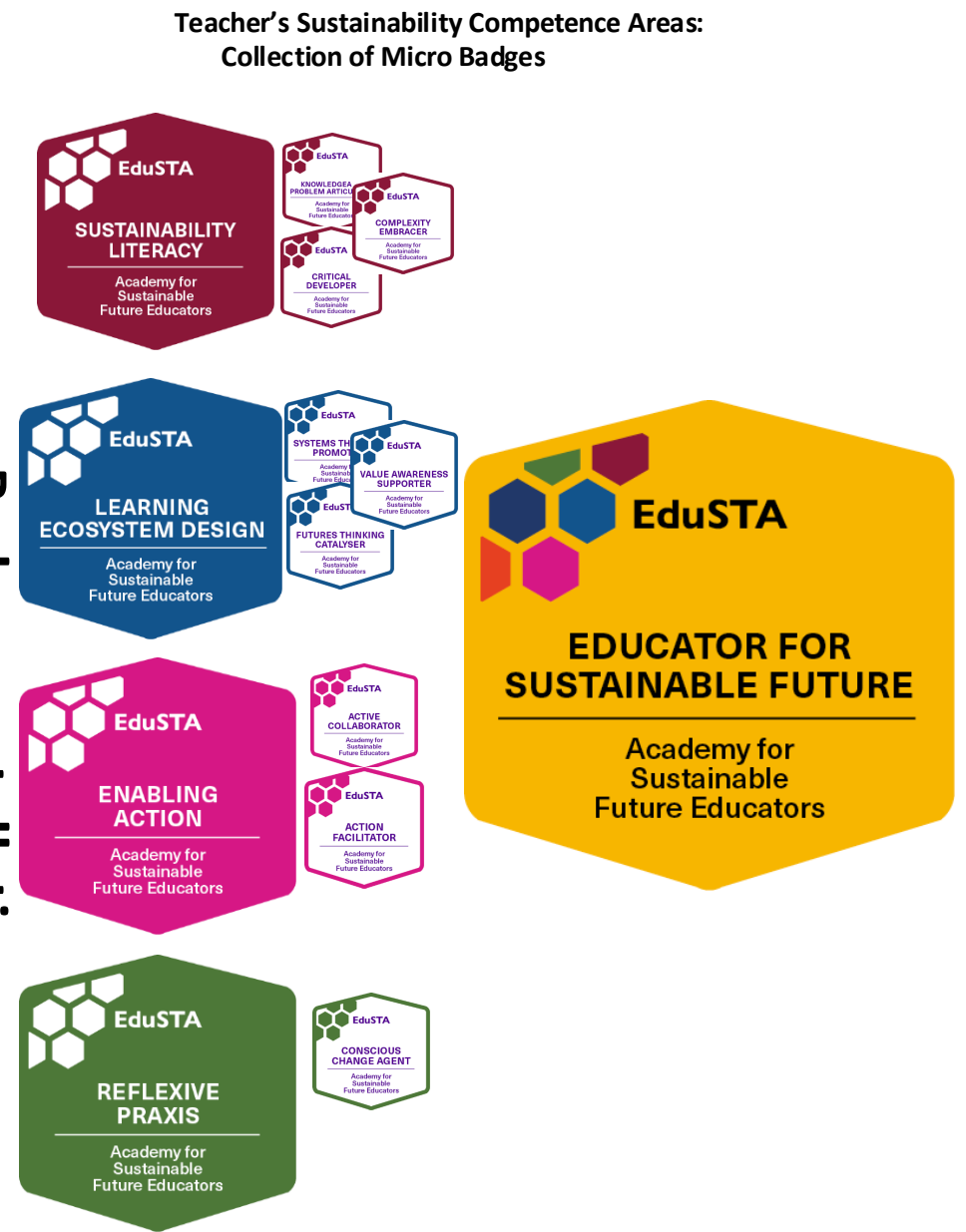
- Different learning pathways:**
- Workshops
  - Training
  - Self-study materials



Academy for Sustainable Future Educators

Achieving competences

**Badge constellation**



# Competence-based Digital Badge-Driven Process

Digital badges are assessed based on applicant's competence demonstration and shared evidences.

# Catalan experiences. Context

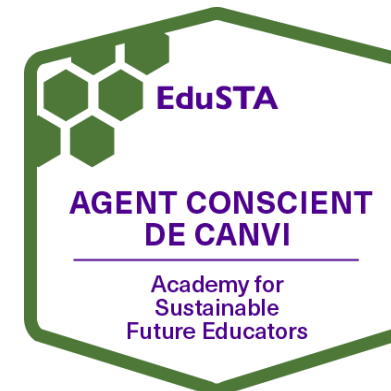
## 2nd year initial teacher training students - Primary and Early Childhood Teacher Education Degrees

2 subjects (3 ECTS each) from an optional itinerary – SCIENTIFIC AND ENVIRONMENTAL:

*Environmental and scientific school experiences* --> Systems thinking promoter

*Geography in a changing world* --> Conscious change agent

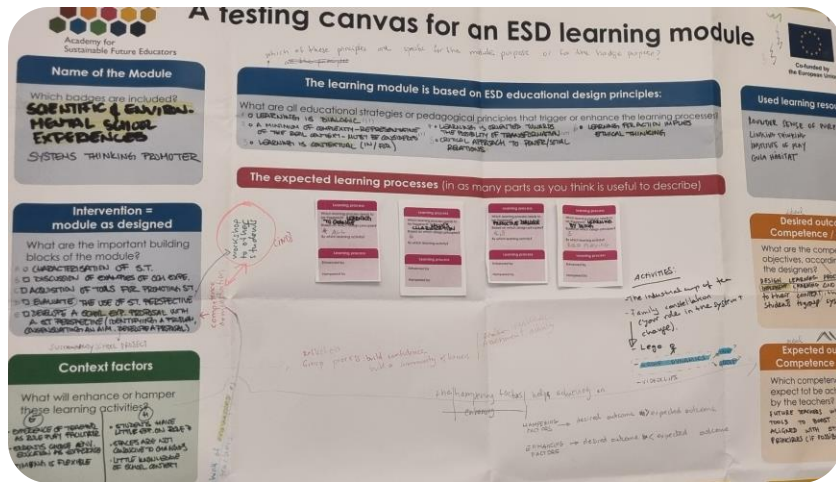
2nd semester: February 2024 – June 2024  
One weekly session of 80' for 12 weeks  
33 students enrolled





# Catalan experiences. UdG Team.

How did we organize the pilot? How did we share different roles among members of the UdG team?



- Two members of the team re-designed, with the assistance of another colleague, two existing modules and then conducted one module each. They assessed the student's tasks in the context of the modules and oriented the students on applying for the two microbadges (one for each module).
- Two other UdG team members were responsible for the assessment of the student's tasks submitted to the badge factory in the context of the piloting, providing feedback and granting the microbadges when appropriate.

# Catalan experiences. Systems Thinking Promoter.

**Contents:** most of the contents had to be adapted to respond the prior contract we have with the students and the study plan + the microbadge demands.

**Methodologies:** role playing + cooperative learning

**Learning outcomes & microcredentials assessment:**

- The participants were able to choose an adequate tool for the learning of ST but they needed support on justifying their decision. They also struggled in justifying why the use of ST contributes to SD goals.
- From the 13 applications, 6 were accepted in the first place and 7 were returned for revision due to lack of specificity in the proposals or the lack of depth in the reflections required to obtain the micro-badge. One of the students returned the application after revision and gained the micro-badge.
- The students used the learning resources provided during the regular course. Some of them were the same provided in the microbadge. National resources were also added.
- The workload was adequate --> same task for course and for OBF. For us it was very clear from the beginning that the demonstration task for the microbadges should not add workload, especially because it would coexist with the exams period.



# Catalan experiences. Conscious Change Agent.

**Contents:** the course was completely redesigned to embed the competence in conscious change agent. It was interesting to do so because it enabled me to connect the competence with geographical thinking and to change the learning process to a more applied one.

**Methodologies:** service-learning, cooperative work and self-reflection.

**Learning outcomes:** students, in groups, were able to create a full proposal of a simulated educational project with the perspective of service learning and then, individually, they wrote a piece of self-reflection on how the development of this project helped them to develop the competence of conscious change agent.

It was necessary to provide a guide to help students to undertake the former learning outcome. After submitting their piece of self-reflection, a feedback was provided by the teacher, and students had the opportunity to improve it and resubmit it --> 13 applications submitted and all of them gained the badge

**Assessment of the pilot:** the microbadge demonstration did not add any extra work as it was the same task for the module.



# Catalan experiences. Opportunities and challenges during the design.

## Improve in ESD alignment

- To integrate the badges in a regular & formal education course, provided new focus and more alignment with ESD competences.
- Implemented active-learning methodologies.

**Students' low knowledge on educational contexts:** we worked with hypothetical cases OR simulations, not real implementation.

**Embed the microbadges in a pre-existing module:** although the badges are flexible enough to adapt their implementation to the context, we found a constraint in the demonstration task and its assessment criteria which, in our opinion, are less flexible. That's why we adapted the assessment criteria and methods of the regular course to fit the demands of the badge.



# Catalan experiences: students' voices after the implementation

- Participants highlighted the way they worked and **deepened their understanding of sustainability** through the **practical approach** and constant support from their teachers, which were key factors in the success of the pilot.
- Eye-opening on what ESD means, reflexive praxis and community engagement.

*"Now I can't see things without service-learning. If I want to do something now, I'll always think about how everyone can contribute"*

*"This vision of systemic thinking makes you realize that easy answers always leave things out."*



# Catalan experiences: students' voices after the implementation

- Importance of **time management** because some students needed longer period to complete the tasks associated with the micro-credentials, especially during their exam periods.
- Overall, some **students did not feel sufficiently capable** for defending competences learned in the classroom since it they had been involved in such a kind of project for the first time.
- **Use of the platform.** Students valued the teachers' support and the documents that were provided to explain step-by-step the entire process. They also appreciated the detailed explanations about the assessment task and the possibility to email the teachers whenever they had doubts about the application process.



# Catalan experiences: formal struggles

**Microbadge driven learning is new in our context.** Students don't value much the fact of being able to accredit a teaching competence regarding ESD (can't see the benefits).

**Translations into Catalan were very important to have.** It took more time than expected to have them ready for the students and due to lack of time we were only able to translate the ones regarding the 2 microbadges that we offered during the piloting --> limitation for offering the opportunity of accrediting other related microbadges.

Due to the timing and restrictions imposed by the UdG's **ethical committee** we couldn't properly explain the piloting to students until the end of the module.





# Catalan experiences – future considerations

## **Pre-service:**

- Conscious change agent → incorporate the design into another course that is compulsory for all students.
- Systems thinking promoter --> we will keep the design, but the module will be placed in the 4th course of the studies within the "scientific and environmental itinerary".

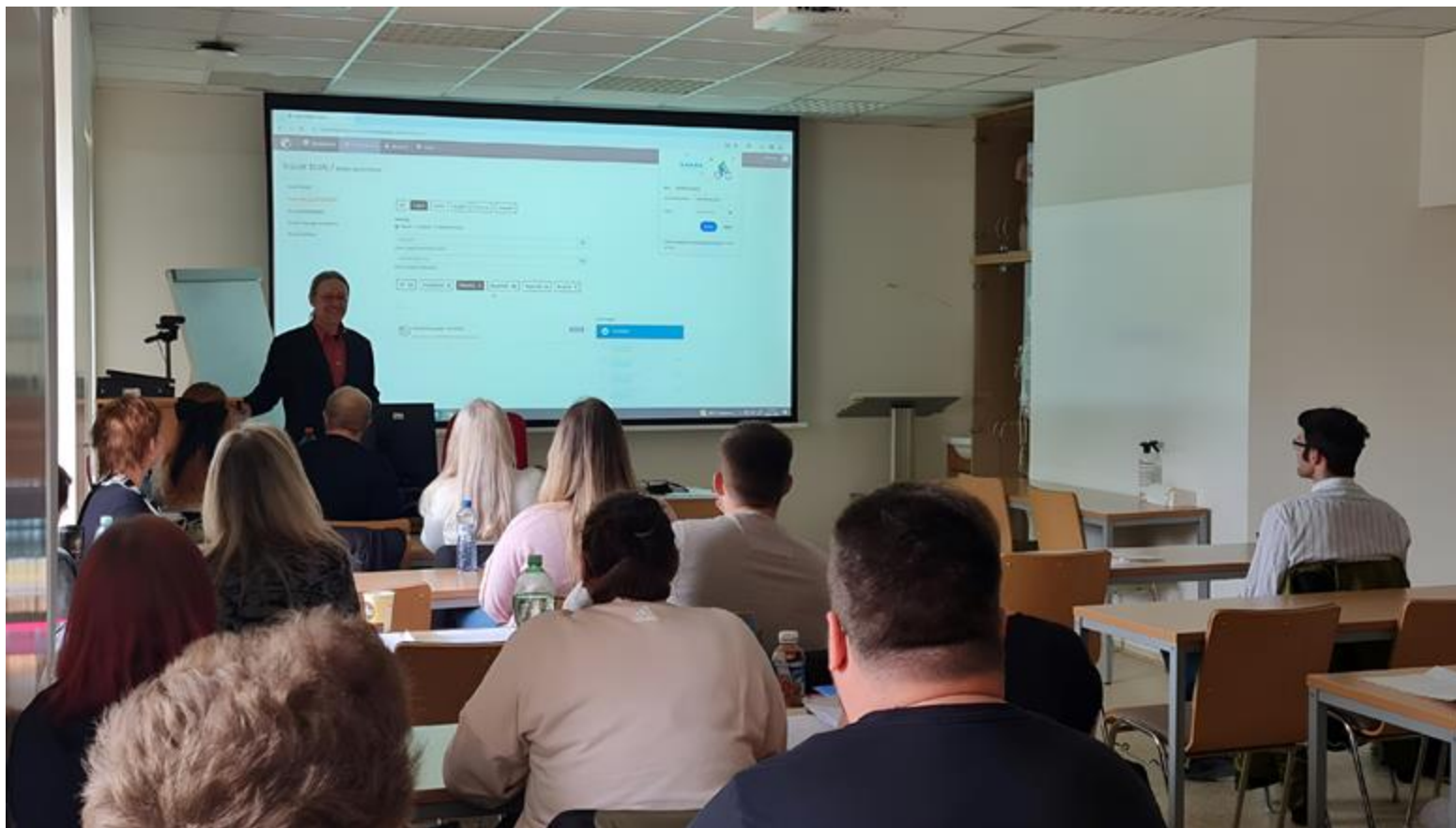
## **In-service teachers (*Policy support needed*):**

- Formal area: certification of the skills of active teachers who are involved in projects related to sustainability in educational centres (Green Schools Network, Schools Network for Sustainability).
- Non-formal area: certification of the skills of education professionals who work in organizations that promote education for sustainability in different contexts.





# Czech pilot - summer semester 2024



# Tested badge / microbadge

- Reflexive Praxis / Conscious Change Agent
- Incorporated into a regular study course (Teaching vocational subjects and practice) and a subject (School pedagogy)
- 62 students enrolled (first year students)
- Hybrid form = an opening tutorial + LMS Moodle support + lectures during the semester according to schedule

# What was an impact?

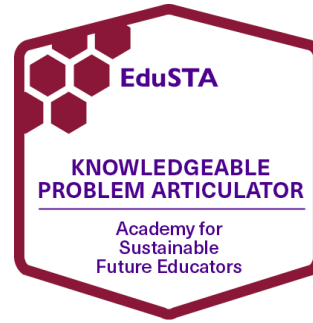
- Experience with one sub-group of Edusta participants during reflection on their school placement (winter semestr 2024/2025); their readiness to take an critical position, to use divergent reasoning
- Transformative learnig effect on student ability to ask questions and to reflect their own practice
- Transformative learning involves:
  - \* becoming more reflective and critical
  - \* being more open to the perspectives of others
  - \* being less defensive and more accepting of new ideas



According to Mezirow, the role of the educator is to help the learner focus on and examine the assumptions that underlie their beliefs, feelings and actions



# Swedish



- University of Gothenburg, Vocational Teacher Programme
- "Development Work and Action Research for Vocational Teachers" (LYK80G)
- Sustainable literacy - Knowledgeable problem articulator
- Pilot 1, December 2023, Pilot 2, June 2024.
- 20 out of 81 Vocational Education Teacher (VET) students applied



# A Knowledgeable Problem Articulator

...understands the background and purpose of Sustainable Development Goals (SDGs) and their interconnection to Education for Sustainable Development (ESD) in their educational context(s).

## **Course assignment:**

- Teaching activities connected to SDG:s in their vocational subject area.
- Oral presentation
- Engaging with questions after peer students presentation.
- Written reflections

## **Competence demonstration:**

Oral presentation, written reflections.



# Learning recourses and Assessment

## Learning resources:

Litterature, lectures, discussions and collaboration with peer students.

## Assessment:

- show understanding of the link between SDGs and ESD in their specific educational context?
- identify examples of how to promote the goals through the work?
- point out barriers that prevent the promotion of SDGs and ESD in their specific educational context?
- identify practical opportunities to constructively articulate and discuss how to implement ESD and SDGs in a holistic way either with their students or with their colleagues?





# One assignment – many solutions

- Construction programme: Assignment; Tinyhouses with solarcells
- Agriculture programme: Environmental day; focus on biodiversity
- Health and social care: Sustainable development in person-centred care

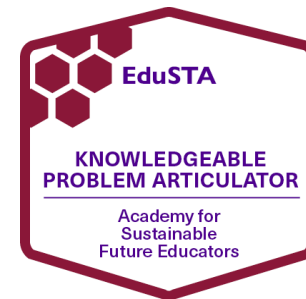
"The word overconsumption itself can be challenging.

Who has the right to say what is too much?"

"How does medicines affect the environment and our ecological system?

Can we humans influence the amount of medicines used?

Look at the issue from both a personal and global perspective?"





# Learning outcomes

- Translation into swedish
- Technical challenges
- Apply for an additional micro-credit?



A warm thanks for  
listening!

// The Swedish team



# ESD Atelier for HEI Teacher- researchers

March – November 2024

@Hanze UAS



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Academy for  
Sustainable Future Educators

# Dutch context – ESD Atelier

@ Hanze UAS Groningen – in service faculty development

## Context

- In service Higher Education teacher-researchers
- Teacher professional development – voluntary participation
- Focus on flexibilization of education (design education for flexible learning)
- Hanze ambition 2030 and new role for teachers: working on societal (sustainability) challenges through interdisciplinary learning communities, embedded in region of Groningen.
- Ambition to anchor SDGs in Dutch UAS education.





# Hanze UAS - Design requirements

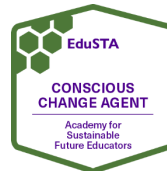
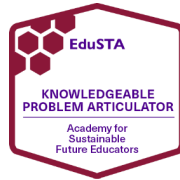
- Integrating badges with professional learning module:  
*ESD Atelier*
  - Walking the talk – hands on: integrating ESD in Hanze education
- Educational principles
  - Learning community of educational stakeholders (teachers, students, educationalists, library)
  - Learning by doing
  - Critical and creative dialogue
  - Autonomy & purpose (defining own learning aims: *How can we...?*)
  - Format: hybrid: in-person & online support, flexible structure, coaching on demand





# Pilot – ESD Atelier

- **ESD Atelier** – 14 participants, monthly meetings march-nov 24 - workshop program to stimulate Hanze teachers and other professionals to act as change agents for LFS in their organisation, teacher training and/or class rooms. Key words: learning by doing, co creation, transformative learning.



# Knowledgeable problem articulator

Bijeenkomst 1

A collage of images and diagrams. It includes a group photo of people, a diagram with a central question mark and icons, a circular diagram with 'RESEARCH' and 'INNOVATION' labels, a vertical bar chart with four colored sections, a drawing of a person thinking 'het kunnen we...', and a corkboard with various papers and photos.

# Systems & Futures Thinking

Bijeenkomst 2

A collage of images and diagrams. It features a quote: 'Decision-makers commonly mistake complex systems for simply complicated ones and look for solutions without realizing that 'learning to dance' with a complex system is definitely different from 'solving' the problems arising from it. — Roberto Poli'. Below this is a cartoon of a bear on a hot air balloon with the text 'SYSTEMS THINKING: A CAUTIONARY TALE'. There is also a diagram of the 'Value Creation Model' showing 'Explore' and 'Evaluate' phases, and a diagram of 'Education... ESD 1: about sustainability, ESD 2: for sustainability, ESD 3: as sustainability'.

# Complexity Embracer & Value Awareness

Bijeenkomst 3

A collage of images and diagrams. It includes a group photo, a speech bubble with a question mark and the text 'Vraag vraag vraag', a diagram with 'FACT' and 'BELIEF' labels, and the text 'Het lastige gesprek', 'Reparatierreflex', 'De duurzame dialoog', 'Oordeel uitstellen', 'Gedragsverandering', and 'Cognitieve dissonantie'. There is also a photo of a presentation by Kyra Luijters and Emil Bosloper.

# ESD Atelier: seven meet ups in 8 months times to build a learning community for faculty with a heart for ESD and to support them in their needs for development

# Systems & Futures Thinking

Bijeenkomst 4

A collage of images and diagrams. It includes a 'SYSTEM MAPPING' diagram, a 'Key Sustainability Competences' diagram, a '3 Horizons Framework' diagram, and a 'Toekomstdenken is interessant' text block. The text block discusses the importance of future thinking and the role of the 'Toekomstdenken' workshop.

# Futures Thinking Catalyser

Bijeenkomst 5

A collage of images and diagrams. It features a grid of photos of cats, a person on a tightrope with the text 'Op twee benen staan Emergentie en Planning', a 'A big tent of Futures' diagram, and a 'Toekomstdenken' table. The table has columns for 'Toekomstdenken', 'Interventie-ontwerp', and 'Toekomstdenken'.

# Conscious Change Agent

Bijeenkomst 6

A collage of images and diagrams. It includes a 'KEEP CALM IT'S THE LAST DAY OF CLASS' sign, a 'Hoop' diagram, a 'Waar zit het licht en donker in je denken?' text block, and a '30 NOVEMBER' text block. The 'Hoop' diagram shows a person sitting on a lotus position with the word 'Hoop' below it.

**Participants ESD Atelier: 14**  
**Micro: 29**  
**Milestone: 15**  
**Meta: 3**



**Overall: 3 pilots resulting in 57 microbadges (5 Meta badges) obtained by 25 applicants**



*I really enjoyed meeting colleagues from very different disciplines and how they are dealing with these issues*

*I am very satisfied with the exchange [between colleagues] and the amount of room left to engage in conversation with each other*

*I find the assignments we do together during those sessions very interesting. I find the information we receive mostly very interesting. I found the models and methodologies we did last time super interesting. I also really liked the Ikigai.*

*Maybe I didn't get it, but somehow I can't manage to make the connection during those meetings with what I am actually working on - It doesn't always feel coherent. It feels more like a course than a learning community.*

*I find it quite complicated with all those badges. But I do see it as added value.*

*I now want to take concrete actions/recommendations to get more futures thinking into curriculum and into awareness of the team*

## **Some quotes from participants**

*So far it has been a fairly operational program, and I would have liked a bit more strategic thinking about how to position it [ESD] and how to set up the conversation about it*

*The topic of having difficult discussions with each other around a sustainability theme, questioning others, I found very educational, that there doesn't have to be a judgment right away, but that it can also just be a question*

*What did those around you notice about your participation?*

- *More/different attention for SDGs in minor*
- *Less judgment, more dialogue and curiosity about the other*
- *More questions about other people's motives, more telling about own choices*
- *More experimentation with various working methods*
- *Team session about our own narratives*





# ESD Atelier & badge driven learning – what came out of it?

- Valuable/meaningful learning experiences reported by participants (educational design research in progress @Centre for Talent & Learning): Definite need for programs such as ESD Atelier pilot in Dutch and Hanze context because of cross disciplinary meeting of minds and action on 'hard to sell' competencies
- However: challenging to motivate participants to redeem (previously acquired) competences – overall teacher researchers were just not that into badge driven acknowledgement.
- Pilot spin off:
  - learning community
  - growing interest in ESD/LFS (and badge driven learning) at management level
  - ESD Atelier embedded in training program offer CTL 2025
  - Collaboration on resources in badge templates with Hanze Library:

[Open access LibGuide](#)



# Badge application & motivation – Hanze

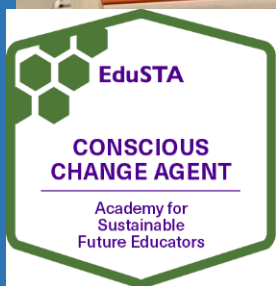
Short poll amongst potential Hanze applicants - Nov/Dec 2024 (n=16)



Main reasons why respondents (intended to) apply for EduSTA badges:

- An attractive way to gain **recognition for knowledge and experience**
- **Visibility teacher competencies** for sustainable education is valuable
- **An addition to learning** within the ESD Atelier
- Part of participating in the pilot ESD Atelier
- Curious about the process of badge application
- Motivating to obtain badges

Respondents of 2 Hanze pilots resulting in 47 badges (5 Meta badges) obtained by 13 applicants



21/11/24 @Hanze: It's a wrap!



# Finnish pilot(s)

- 3 target groups: 1) teaching staff at Tredu vocational college; 2) teaching staff at TAMK; 3) teacher students at TAMK
- Common denominators:
  - Offering the whole constellation
  - Facilitated process combining f2f or online workshops and Moodle learning environment
- Main differences:
  - Tredu teachers were given worktime to participate
  - Students received 5 credit units for completing the meta badge





# Number of badges issued 21.11.2024



15 metabadges have been issued

## SUSTAINABILITY LITERACY 24 milestone badges

Knowledgeable problem articulator: **21**

Complexity Embracer: **32**

Critical Developer: **10**

## LEARNING ECOSYSTEM DESIGN 23 milestone badges

Systems thinking promotor: **21**

Future thinking catalyser: **26**

Value awareness supporter: **16**

## ENABLING ACTION 25 milestone badges

Active collaborator: **13**

Action facilitator: **13**

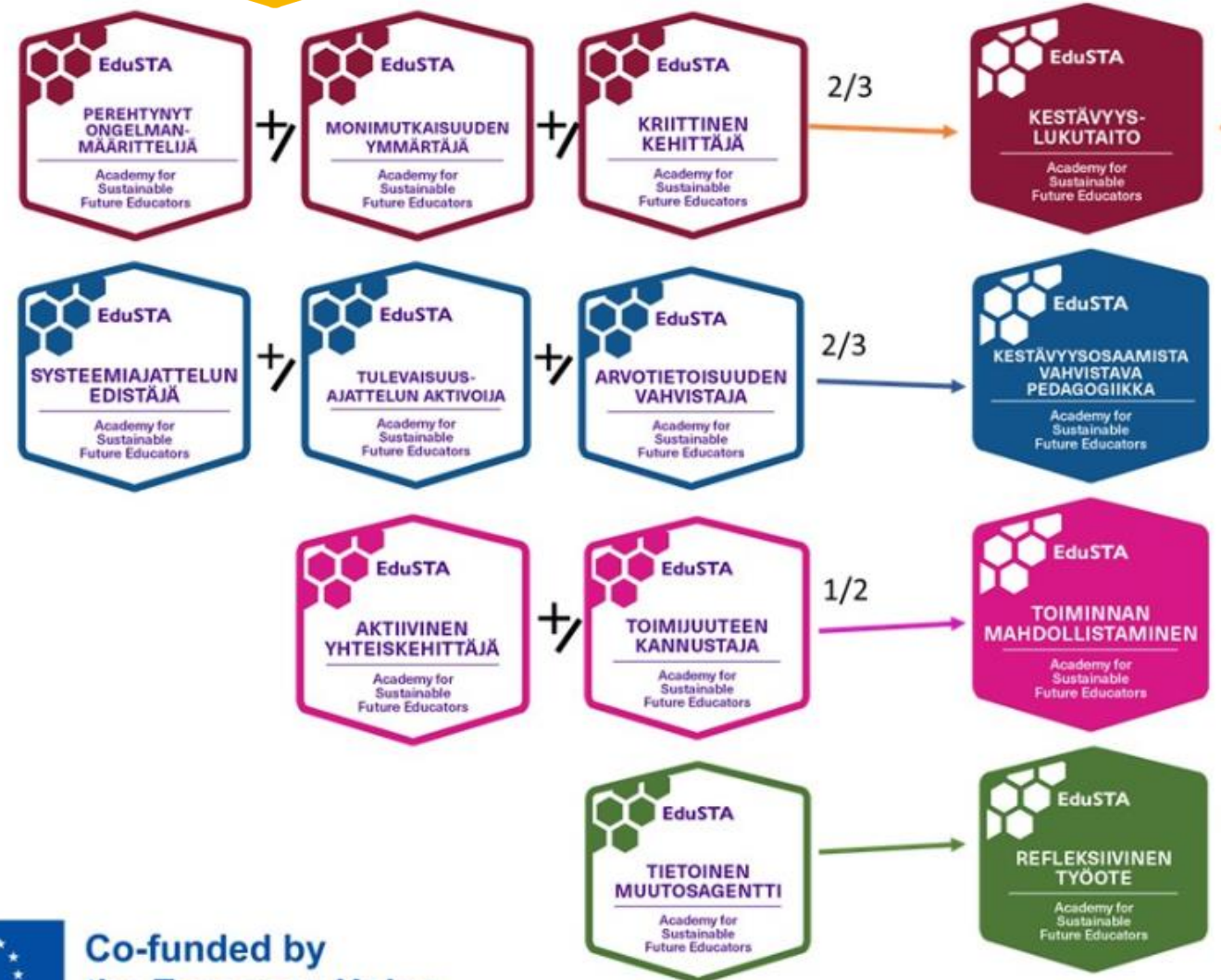
## REFLEXIVE PRAXIS 23 milestone badges

Conscious change agent: **23**

**174 microbadges have been issued**

1/3 Vocational teachers (Tredu), 1/3 Teacher students and

1/3 TAMK staff



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## Pilot evaluation

- Focus group interviews with
  - TAMK team involved in pilots
  - Tredu pilot participants
- Online survey
- Final seminar at Tredu

# Observations (participants)

## We love this because...

- A practical framework that forces to reflect and translate abstract ESD knowledge into practical action in teaching
- The ability to contextualize and directly connect with one's own field and everyday work
- Conversations and teamwork with colleagues, also across subject matter borders

## This was challenging...

- Putting abstract knowledge and previous competences into words, making sure it answers the evaluation criteria
- Understanding the differences between learning goals and evaluation criteria
- Narrowing down, focusing in



# Observations (our team)

- The workshops and conversations in groups were extremely fruitful and helpful, but they were not always well attended – could the concept of workshops be further developed?
- The participants needed guidance mostly with narrowing down and verbalizing their existing competences to meet the specific criteria of each badge.
- The language of badge descriptions should be clarified (abstract, clumsy)
- Learning resources were good but it may be hard to find the most relevant ones
- The role of community – both for participants and providers!

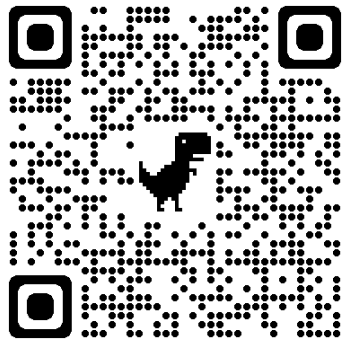




**Thank you!**

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