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![EduSTA logo — Academy for Sustainable Future Educators]

EduSTA Project:
Academy for Sustainable Future Educators

COMPETENCE-BASED BADGE CONSTELLATION FOR SUSTAINABLE FUTURE EDUCATORS

https://projects.tuni.fi/edusta/about/

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COMPETENCE-BASED BADGE CONSTELLATION

- The team of project "Academy for Sustainable Future Educators" carried out an extensive context and competence analysis (see EduSTA brochure #1). The result of this analysis was the basis for the development of the competence-based badge constellation. The digital competence-based badge is a modern **micro-credential** i.e., **a small set of competences**.

- The pedagogical approach is open **digital badging** and **badge-driven learning** (Brauer, 2019) from the perspective of supporting **competence-based professional development** and **lifelong teacher education**. The research-based model was developed as part of Finnish pre-service and in-service teacher education.

- Digital badges are a **digital record of competences**. They contain **competence objectives, assessment criteria** and **ways of demonstrating competence**. Digital badges allow the identification and recognition of different competences acquired in formal or informal education.

- They can be used to identify and recognise **knowledge, skills** and **achievements** gained through **study, work, hobbies, projects**, and many other contexts. Badge applicants demonstrate their competences by completing authentic work tasks in an educational institution or as part of initial teacher education.

- Digital Open Badges are information storage tools that contain **the visual image** as an icon, **the name of the badge**, **the issuer** (e. g. university ort training centre), **the competence description**, **the assessment criteria**, **and the evidence of the badge holder's competence**.

- The badge criteria explain the competence through **learning objectives** and **assessment criteria**, as well as **instructions for demonstrating the competence** (evidence).

- **Learning materials** are listed to help badge demonstrators. Materials can be added or changed during piloting to ensure up-to-date materials.

- **For recognising**, **validation** and **accreditation** of co-designed competence-based badges is used a licence of "**Open Badge Factory**" platform (https://openbadgefactory.com/en/).

- All digital badges are part of the Academy for Sustainable Future Educators (EduSTA) badge constellation. The badges are assessed by the project consortium, it means by academicals and experts from partner universities of the project EduSTA.

- In following pages, the badge constellation to promote educators' competences for sustainable development in four specific areas are presented. The constellation includes:
  - 1 meta-badge
  - 4 milestone badges
  - 9 micro-badges.

MILESTONE BADGE 1: SUSTAINABILITY LITERACY

This milestone badge proves that educator uses knowledge in a responsible way to further sustainable development through education. The Sustainable Literacy milestone badge contains three micro-badges: knowledgeable problem articulator, critical developer, and complexity embracer.

Micro-badge 1.1: Knowledgeable Problem Articulator

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).

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- understand how SDGs and ESD are connected to their educational context(s) and work
- identify problems or challenges in the implementation of SDGs and ESD in their educational context and work as a teacher
- discuss observations with colleagues or facilitates students' active observation of connections of SDGs and their lives or future professions.

Assessment criteria

The badge recipient:

- understands the main links between Sustainable Development Goals to their educational context(s)
- identifies problems or challenges in the implementation of SDGs and ESD in their educational context and work as a teacher
- constructively discusses observations with colleagues or facilitates students' active observation of connections of SDGs and their lives or future professions.

Micro-badge 1.2: Critical Developer

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CRITICAL DEVELOPER

Academy for Sustainable Future Educators

A Critical Developer uses knowledge related to sustainable development, sustainability competences, Education for Sustainable Development, and national policy documents on implementing SD in education to critically develop teaching or curricula.

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- integrate knowledge related to sustainable development, ESD approaches and sustainability competence frameworks in teaching practices and curriculum development
- take actively into account of the changing and contradictory nature of sustainability-related information when choosing the contents of teaching or curriculum development
- evaluate the sustainability and sustainable development aspects and knowledge of sustainability competences in their own teaching practices, educational context, and curriculum
- be aware that sustainability knowledge changes fast and shows willingness to revise their teaching material and course plans regularly and integrate new developments of sustainability of their educational context and ESD into their teaching practice.

Assessment criteria

The badge recipient:

- integrates sustainable development knowledge and knowledge of sustainability competences into his/her own teaching practice, educational context or curricula
- demonstrates awareness of the changing and contradictory nature of information related to sustainability when planning the contents of teaching or curriculum development
- critically evaluates a teaching plan and identifies possibilities for improvement of ESD and SD competences
- shows plans to revise their course plans and material.

Micro-badge 1.3:
Complexity Embracer

A Complexity Embracer is aware of and acknowledges complexity in his/her professional/daily practice. He/she discusses and reflect upon uncertainties and contradictions with colleagues, students, and community.

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- identify worldviews, assumptions, and values about sustainability issues
- apply reflectional dialogical techniques and methods to encourage systems thinking and broader perspectives on sustainability issues
- cope with complexity and display openness, curiosity, and willingness by welcoming uncertainty, change and growth.

Assessment criteria

The badge recipient:

- promotes and engages in conversations with colleagues, students and/or community on sustainability issues to identify worldviews, assumptions, and values about sustainability issues
- uses critical and reflectional dialogical techniques and methods to foster systems thinking and wholistic broader perspectives on sustainability issues
- is aware of key moments in conversations in which openness, curiosity and willingness are modelled and triggered regarding uncertainty, change and growth.

MILESTONE BADGE 2: LEARNING ECOSYSTEM DESIGN

This milestone badge proves that educator designs learning environments and processes that facilitate the development of Green Comps. The Learning Ecosystem Design milestone badge contains three micro-badges: systems thinking promoter, futures thinking catalyser, and value awareness supporter.

Micro-badge 2.1: Systems Thinking Promoter

A Systems Thinking Promoter can design teaching and learning processes, utilise learning environments, and implement learning and assessing methods which help students to grasp the systems.

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- design learning processes (which include environments and methods) and implement learning and assessing methods to their context that support students to grasp systems by helping them to address challenges while considering the interconnectedness of the entire system
- identify learning opportunities, utilize learning environments and implement teaching and assessing methods that support the student to deal with complexity and uncertainty
- justify his/her choices in the terms of supporting sustainable development and development of student's sustainability competences.

Assessment criteria

The badge recipient:

- designs learning processes (which include environments and methods) to his/her context which helps students to grasp the systems
- designs teaching and learning processes and applies methods that support students' capacity of system thinking, problem framing and critical thinking on SD related issues in his/her own context
- selects learning and assessing methods that help students to deal with complexity and uncertainty by improving their competence to think critically, to analyse, interpret, and evaluate the problems dealing with SD
- justifies their choices in the terms of supporting sustainable development.

Micro-badge 2.2:
Futures Thinking Catalyser

A Futures Thinking Catalyser can design teaching and learning processes, utilize learning environments, and implement learning and assessing methods that facilitate student's futures thinking.

Apply for badge in Open Badge Factory **here**.
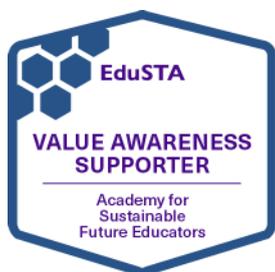
Competence objectives

The badge recipient is able to:

- design learning processes (which include environments and methods) to their own context to encourage students to become futures literate
- identify learning opportunities, utilize learning environments, and implement teaching and assessing methods:
  - that encourage students to use future insights when making informed decisions in the present
  - that strengthen students' abilities to envision alternative futures and envisioning change
- support transformative learning processes
- reflect upon their actions and justify their choices in the terms of supporting sustainable development.

Assessment criteria

The badge recipient:

- designs learning processes (which include environments and methods) to their context that facilitate student's future thinking
- designs teaching and learning processes and applies methods that strengthen students' ability to envision alternative futures in terms of sustainability in their own context
- supports transformative learning by including elements of reflection and critical questioning to the learning process and assessing methods
- reflects and justifies their choices in the terms of supporting sustainable development.

Micro-badge 2.3:
Value Awareness Supporter

A Value Awareness Supporter can design teaching and learning processes, utilize learning environments, and implement learning and assessing methods that helps students to identify, evaluate, and reflect upon their values.

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- identify opportunities to support student's value awareness in their own field of study
- design learning processes (which include environments and methods) to their on context:
  - which support and help students to expresses empathy
  - that support students to identify, evaluate, and reflect their values
  - that support students to reflect and analyse the impact of their actions in terms of sustainability
- utilize community-driven learning processes
- justify his/her pedagogical choices
- reflect his/her own values in terms of sustainability and what he/she represents as a teacher.

Assessment criteria

The badge recipient:

- designs and facilitates learning processes that helps students become aware of their values and helps them to develop an emotional connection with the others
- utilizes community-driven learning processes appropriate in their own context to support students to reflect and analyse the impact of their actions in terms of sustainability
- implements learning and assessing methods that enable and help students to identify, express, negotiate and reflect their own values, principles, and sustainability objectives while acknowledging different points of view
- justifies her/his choices and reflects their own values in terms of sustainability and what kind of examples they give.

MILESTONE BADGE 3: ENABLING ACTION

This milestone badge proves that educator organises collaborative communal action and facilitates the development of student's agency. The Enabling Action milestone badge contains two micro-badges: active collaborator and action facilitator.

Micro-badge 3.1: Active Collaborator

An Active Collaborator co-operates to strengthen communal action for sustainable future.

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- identify sustainability challenge(s) that are relevant to their educational context and that can be tackled by communal action
- identify relevant stakeholders, also outside the school environment, to collaborate with and establish contact with them
- take an individual initiative to achieve change towards sustainability.

Assessment criteria

The badge recipient:

- analyses and describes the challenge in terms of Education for Sustainable Development, for instance using the Green Comp framework
- justifies the stakeholder's role and relevance for the challenge in question and describes how they have contacted them
- describes the nature of the initiative and justifies the actions taken
- explains how the initiative/action promotes sustainable development.

Micro-badge 3.2:
Action Facilitator

An Action Facilitator designs and organises opportunities that trigger and support student action for sustainable future.

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- create learning opportunities for students to take initiative towards sustainability in their educational context
- facilitate students to identify sustainability challenge(s) that they can tackle by communal action
- help student identify relevant sustainability
- support students in taking a collaborative action to achieve change towards sustain-ability.

Assessment criteria

The badge recipient:

- describes the learning opportunity they provide for students, and explains how it contributes towards action for sustainability
- supports different types of learners to experience sustainability challenge(s) and play a role in the initiative, and support students' learning with each other and co-create outside the classroom context.

MILESTONE BADGE 4: REFLEXIVE PRAXIS

This milestone badge proves that educator learns purposefully from her/his actions to improve in a dialogue with community, society, and science. The Reflexive Praxis milestone badge contains one micro-badge.

Micro-badge 4.1: Conscious Change Agent
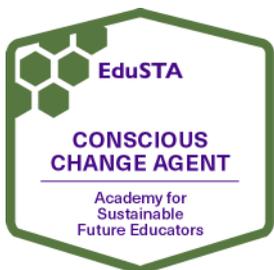
A Conscious Change Agent reflects on the institutional and professional polices and strives towards continuous personal and institutional learning in ESD using tools of reflection.

Apply for badge in Open Badge Factory **here**.

Competence objectives

The badge recipient is able to:

- articulate his/her position as a change agent, envision possibilities for sustainable change, and explore and discuss multiple solutions and possibilities for action in the educational context
- revisit his/her actions and decisions as an educator with informed understanding how policies, structures, assumptions and values affect the realisation of Education for Sustainable Development in an educational context
- maintain hopefulness and consider emotions when anticipating and influencing changes for ESD.

Assessment criteria

The badge recipient:

- clearly articulates his/her possibilities and restrictions as a change agent in the educational system (and beyond)
- envisions possibilities for sustainable change, explores alternatives to acting and strengthens hopefulness in daily practices
- with the help of reflection tools, revisits his/her actions and decisions as an educator to reflect how changes in policies, structures, assumptions and values have affect a realisation of Education for Sustainable Development in their educational context.

META-BADGE: SUSTAINABLE FUTURE EDUCATOR

This badge constellation consists of nine micro-badges, four milestone badges representing different areas of expertise, and then a meta-badge representing the whole.

- To earn **Sustainability Literacy Milestone Badge**, educator must achieve at least two of three micro-badges.
- To earn **Learning Ecosystem Design Milestone Badge**, educator must achieve at least two of three micro-badges.
- To earn **Enabling action Milestone Badge**, educator must achieve one of two micro-badges.
- To earn **Reflexive Praxis Milestone Badge**, educator must achieve one micro-badge.

To earn the Sustainable Future Educator meta badge, educator must have earned all Milestone Badges (4).

Picture 1: EduSTA badges constellation

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