



Co-funded by  
the European Union

## EduSTA Project: Academy for Sustainable Future Educators

# TEACHER TRAINING FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT: FIVE NATIONAL CASES

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



# ACADEMY FOR SUSTAINABLE FUTURE EDUCATORS

## About

EduSTA builds a community, “Academy of Educators for Sustainable Future”. Teachers have a crucial role in bringing the extensive social changes that are needed in the building of a sustainable future. EduSTA project strengthens the European dimension of teacher education via Digital Open Badges as means of performing, acknowledging, documenting, and transferring the competences as micro-credentials.

## Goals

- Achieving closer cooperation with training schools to actively engage in-service teachers
- Mapping the contextual possibilities and restrictions for transformative learning on sustainability
- Analysing sustainability competences frameworks of teachers
- Developing competence-based learning modules and open digital badge-driven pathways
- Providing new badge applications for all teachers in Europe.



EduSTA project illustration  
Author: Ester Tajrychová

# RESEARCH PHASE

Teachers' sustainability competences have been researched widely but a gap remains between research and the actual work of teachers. One of the EduSTA project's goals is to address this gap. Insights coming from these data will provide the background information for the development of education and digital open badges.

**Period of data collection:** January–February 2023

**Involved countries:** Czech Republic, Finland, Netherlands, Spain (Catalonia), Sweden

**Methodology:** Desk and qualitative research

## Objectives:

- Mapping the legislative frameworks in life-long learning of VET teachers in areas of ESD
- Identifying contextual possibilities and restrictions for transformative learning on sustainability

## Areas:

- Characteristics of an educational institution that is working on ESD
- ESD teachers: competences, knowledge and praxis
- Teacher education for ESD
- Situation of ESD in each partner country
- ESD in academic institutions
- Connecting educational institutions to their surroundings/communities
- ESD in the context of educational change
- ESD policy

## Process:

- Conducting workshops in co-operation with the training schools
- Interviewing key stakeholders connected to education and teacher training programmes
- Surveying the politico-legislative frameworks

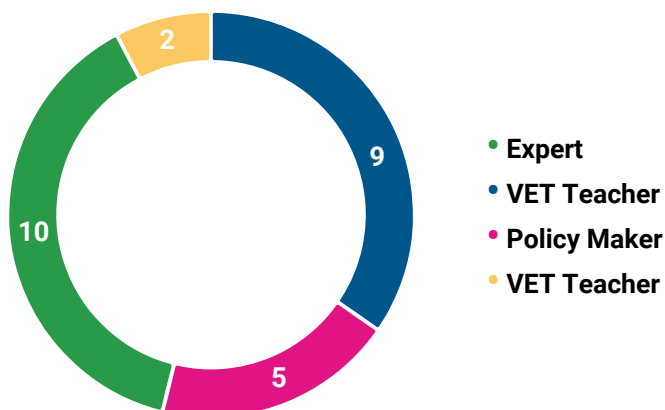
**Research sample:** head teachers (school principals) / in-service teachers / ESD experts and policy makers / pre-service teachers

Detailed data in the report Asikainen, E., Almetller, J., & Němejc, K. (2023). *Teacher Training for Education for Sustainable Development: Developing a Shared Competence Framework*. Prague: CZU.

## INDIVIDUAL INTERVIEWS

	FL	SW	NL	CZ	ES	Total
In-service Teacher	3	5	0	0	1	9
Policy Maker	1	0	1	0	3	5
Expert	1	0	3	5	1	10
Academic Staff	1	0	0	1	0	2
Total	6	5	4	6	5	26

# RESEARCH PHASE

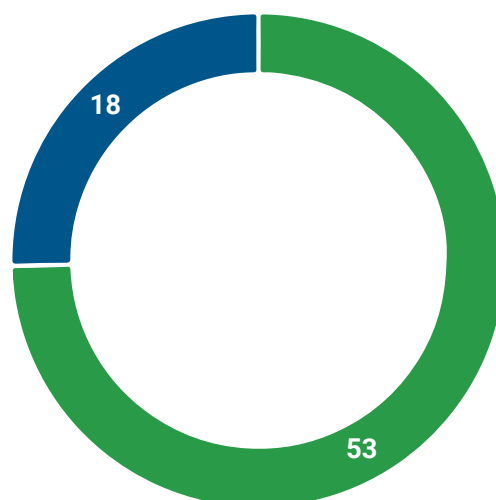


## WORKSHOPS

	FL	SW	NL	CZ	ES	Total
In-service Teachers	21	x	15	8	9	53
Pre-service Teachers	5	x	1	12	0	18
<b>Total</b>	<b>26</b>	<b>0</b>	<b>16</b>	<b>20</b>	<b>9</b>	<b>71</b>

The purpose of this newsletter is dissemination of research results to broad public. This material does not contain all the comprehensive results, in the following pages, there are just brief highlights presented.

The competences to be strengthened represents only the most often mentioned examples of characteristics, knowledge, skills and values by the interviewed in-service teachers.



- In-service Teachers
- Pre-service Teachers

# CATALONIA, SPAIN

*"Knowledge is very important. Teachers need specific sustainability knowledge in order to be empowered to lead the change in this area."*

## National Policy

ESD is considered a transversal element of public policies in Catalonia. This transversality is reflected in different areas in the policy agenda, such as: **water waste, energy saving, curriculum** (curriculum greening), **building management** (materials, resources, etc.), **participation and involvement** of the entire educational community and **relationship with the school environment** (social, cultural, natural, non-formal organisations, other stakeholders).

## Curriculum

ESD is also conceived as a **transversal element of the curriculum**, so there aren't much specific guidelines for educators on how to develop ESD principles in the educational context.

ESD is not embedded in education structures and it relies on school champions. Even in schools that actually develop ESD oriented programmes (Green Schools), the projects currently taking place are mostly about recycling and do not have an impact in teaching and learning.

## Teacher Training

ESD actions are developed through projects rather than in classical lessons and frontal teaching. The **Green Schools Programme** is key to ensure in-service teacher education in this area. It is identified as a **benchmark for good school practices**, is identified as a good example of governmental support and teachers also highlight the role of its trainers. They seem to be the closest figure that a teacher has as a reference in education for sustainability in the school context.

There aren't specific courses related to ESD competences during pre-service teacher training, lifelong learning in this area is on **voluntary basis**: there isn't a specific policy that provide specific courses for teacher development.

## Challenges

At this moment there are not incentives for teacher educators to innovate in ESD, without incentives or recognition, academics and teachers lose interest in working towards these issues.

## Competences

### Personals Characteristics

student cantered approach / active engagement

### Knowledge

disciplinary and curricular knowledge / project management / project based learning

### Skills

teamwork skills

### Values

supporting learners / promoting relationships with the community

# CZECH REPUBLIC

*"The way to develop a teacher is through self-awareness.*

*Any development must be promoted non-violently."*

## National Policy

The strategies on education for sustainable development (ESD) are part of a larger concept: **the Strategy 2020-2030+**. This is a key document for the development of the education system in the Czech Republic in the decade 2020–2030+.

In the Czech Republic, ESD is described in four areas or so-called the **cross-curricular themes** for secondary education: **Environment and Sustainability, Labour Market, Inclusive Education & Equal Opportunities** and **Global Development Education**. The cross-curricular themes are part of the **Framework Educational Programmes** which form a generally binding framework for the creation of **School Educational Programmes** of all fields of education from pre-school to secondary education.

## Curriculum

Head teachers and teachers at secondary vocational schools are aware of the importance of ESD and are actively implementing its principles into the curriculum. However, these **activities are voluntary** unless they are part of vocational subjects (e.g., in agricultural and forestry schools).

Cross-curricular themes can usually be implemented by integrating them into subjects, by introducing a separate subject or by project-based learning. However, there is no model concept to lean on.

## Teacher Training

Some training programmes are available and have been executed, but incidentally and fragmented, mostly reaching the intrinsically motivated teachers and/or frontrunners of educational change. They have not been integrated as a formal part of teacher training for UAS teachers yet.

## Challenges

All teachers and school head teachers see very little time to actively search for new trainings and courses as **there are no comprehensive documents and methodology** available on the professional development of ESD teachers.

Lifelong learning of teachers lays on head teacher's passion, who sees in ESD trainings and activities a priority overall.

## Competences

The competences of ESD teachers are partially mentioned in the legal acts on pedagogical workers. A short paragraph is also provided in the educational strategies. Sometimes the teachers themselves do not know what is realistically expected of them, and what also belongs to education.

### Personals Characteristics

pro-activity / empathy / fair / open-minded / stress resistant / logical and analytical thinking

### Knowledge

didactics / basics of psychology / ESD goals / motivation techniques

### Skills

collaborative skills / self-reflection skills / critical thinking skills / crisis management skills / intercultural skills / green skills

### Values

students oriented approach / European approach / civil responsibility behavior

# FINLAND

*"The key is how each researcher, teacher and staff member see own subject in relation to sustainability."*

## National Policy

At the policy level, the highest document guiding ESD is the **Strategy of the National Commission on Sustainable Development 2022–2030** by the Prime Minister's Office. The strategy states the importance of institutional culture and learning environments in ESD. (FNCSD 2023). In its **Sustainable Development Policy**, the Ministry of Education stresses the importance of addressing the sustainable development perspectives in teacher education and supports strengthening of sustainable development in in-service training of teachers. This is an instrument of funding further education activities organised by teacher education institutions and by NGOs that work closely with teachers (including WWF Finland and Finnish United Nation's Association). However, there are no legal competence requirements on ESD competences, which would cover all teachers.

## Curriculum

The Government Programme requires that sustainable development, climate and gender equality education will be taken into account as **cross-cutting themes** at different levels of education.

In the Finnish VET, an approach of holistic institutional development of SD is quite strong. This is supported by a certification system created and run by an educational foundation and supported by the Ministry of Education and Culture (OKKA-foundation). Furthermore, the National Board of Education is financing a project developing a **Road map for sustainable development in VET** (VASKI project).

## Teacher Training

The understanding of key concepts and a positive attitude towards sustainable development were mentioned as the most important factors for a teacher to be able to develop **knowledge-based specialization on ESD** and find concrete pedagogical solutions. Teachers feel that they need guidance or instructions to make abstract topics and concepts more concrete.

## Challenges

The lack of resources for teacher training and teaching. The SD theme does not always get the attention it deserves. Lack of "formal" opportunities for reflection and evaluation of the teachers' SD skills.

## Competences

**Sustainability competences** are one of the **nine main themes** stated in the guidelines for applying for funding (OPH 2023). General guidelines for educational institutions have been given by the government, but regional, subject-specific, etc. differences are notable.

### Personal Characteristics

fair / creative / open-minded / self-reflective

### Knowledge

experiential learning / active learning methods

### Skills

collaboration skills / critical thinking skills / creativity and innovation skills / digital skills (e.g. specifically using carbon footprint)

### Values

ethics / sustainability / work-life balance

# NETHERLANDS

**"System changes starts with the system -  
- we cannot place the burden on the individuals."**

## National Policy

ESD in the Netherlands has been addressed by the Dutch government in a **national plan Duurzaam-Door**, applicable to both research universities and universities of applied sciences (UAS), and supports formal, nonformal, and informal learning. Its underlying concepts are based on **multi-stakeholder participation**, cocreation, social innovation, and transformative learning.

## Curriculum

Explicit examples of active promotion of ESD teachers' competences however are still scarce, as well as the integration of ESD into core curricula. At tertiary level, ESD is being stimulated through institution level programmes such as the **Green Ambassadors Programme** at Hanze UAS, where students can apply for certificates to validate accomplished education on sustainable development.

## Teacher Training

Some training programmes are available and have been executed, but incidentally and fragmented, mostly reaching the intrinsically motivated teachers and/or frontrunners of educational change. They have not been integrated as a formal part of teacher training for UAS teachers yet.

## Challenges

Although steps are being taken, more space for experimentation to emerge needs to be made available. Not enough educators or educational institutions are "walking the talk" regarding ESD.

The importance of ESD is being recognized in theory, **action in practice still proceeds slowly**. One of the key challenges is that while it is important to build the capacity of individual educators, institutional support and curriculum-based approaches to implementing ESD are necessary to enable educational change for ESD in practise.

## Competences

### Personals Characteristics

empathy / open mindedness / vulnerability / equitability

### Knowledge

futures literacy / systems thinking / problem solving methods / design-based, challenge-based, case-based learning

### Skills

communication skills in leading discussions within a diverse group in a normative context / collaborative skills / self-reflection skills / systems thinking / ability to create a safe atmosphere

### Values

multi-stakeholder participation / relationship built on trust / interdisciplinarity and multidisciplinary approach / student-oriented approach / community



# SWEDEN

*“Teaching is not about transmitting knowledge, rather it is about life-long learning, personal change, to support the development of new understanding, and awareness.”*

## National Policy

Sustainable development (SD) has been on the Swedish Higher Education Institutions' Agenda since 2006 (Gough and Scott, 2007), and is in line with the Brundtland Commission's (1987) definition of sustainability as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations 1987). Since 2011, Swedish Society for Nature Conservation has been established as a promoter of education for sustainable development in the Swedish School system mainly through supporting teachers and trainers.

## Curriculum

Sustainability is built into all teacher education courses including vocational teacher education. It is **mandatory for teachers to incorporate ESD into all subjects** in compulsory schooling, as knowledge about the concept of sustainable development is examined in courses. The objective of the vocational teacher degree is "to demonstrate the ability to make assessments in the pedagogical work based on relevant scientific, societal, and ethical aspects, with particular consideration for human rights, especially children's rights according to the Convention on the Rights of the Child, as well as sustainable development" Higher Education Ordinance (1993:100).

In their study, Finnveden et al. (2020) note that most of the 47 HEIs investigated in Sweden offer courses or degree programmes in which SD has been integrated, and only about a quarter of the HEIs were considered to have established "a well-developed process for their work on SD in education". but that the quality of work varies.

## Teacher Training

There is a call for vocational education and vocational teachers to become more attentive to ESDs. Subject integration is an excellent way to create a context where teachers with different competences can contribute to courses and programmes.

Some solution can be made through the council of the initiative The Green Flag. The Green Flag is a component of the international Eco-Schools programme, established by the Foundation for Environmental Education (FEE), an environmental education organization. The council consists of students, teachers, and staff, and together they brainstorm ideas and decide on the development areas to focus on for the year.

## Challenges

There is a **lack of national initiatives supporting the development of vocational teachers' competences**. The development of professional competences in ESD lies with each educational institution/school/authority responsible for the professional development of its teachers.

One of the challenges relates to workplaces that are not always the role models that schools/vocational education have hoped for and require active dialogue both with students and with workplaces.

## Competences

### Knowledge

professional knowledge / digitalization / ESD goals / cultural diversity

### Skills

didactic / digital literacies / conflict management / critical thinking

### Values

democracy / ethics / inclusion / human rights / professionalism

# CONCLUSIONS

*“ESD expert teacher should be a role model for students through his / her actions and decisions.”*

- The role of ESD in policy documents varies considerably from country to country. In countries where ESD it's not identified as a national priority, it is mentioned as a **transversal issue, cross-curricular agenda**, or a means to achieve SDGs.
- There are **no legal requirements on ESD teachers' competences**, nor comprehensive documents available on professional development in this area, there is not a clear path on how to implement those policies neither in pre-service nor in in-service training.
- At the vocational schools in the project countries' the ESD goals are being fulfilled mainly through different **national projects or initiatives**, e. g. projects “Templates” or “Clean Up Czechia” in the Czech Republic, “Roadmap for Sustainable Development in VET” within a project “VASKI” in Finland, recognizable national qualification “Working with Climate Responsibility”, “Green School Programme” in Spain, national plan of the government “DuurzaamDoor” in the Netherlands. Similarly, in Sweden, there is project “Keep Sweden Clean” funded by Swedish Environmental Protection Agency and there are several certified ESD courses and programmes offered both at Upper Secondary Schooling (Gymnasium) and Adult Education (Komvux), for example, certified “Green-Flag” (Grön-Flagg).
- ESD strategic plans include specific **teacher training**, but this **is often not mandatory** for educational institutions (not applicable for Sweden, and partially for Finland).
- In Swedish universities, ESD topics are **obligatory** and **integrated into all programmes**. In the Czech Republic, Finland, the Netherlands, and Spain, ESD is a part of the curricula in specific programmes within both the secondary and tertiary education, e. g. water management, environmental education, in the other programmes it is solved on the basis of crosscutting themes.
- **Transdisciplinary approaches, critical and system thinking, futures literacy, active learning and transformative learning** (project-based learning, problem-solving designing, cooperative learning) are the most suitable topics and methods for training students in ESD.
- The **positions of ESD coordinator** are not compulsory at Catalan, Czech Dutch, Finnish, and Swedish schools. This role, while, mandatory, is not anchored by law. There are some positions, which correspond only with several concrete ESD areas and the goals sometimes overlap, e. g. **educational and career counsellor** (ESD goal 4, 8, 10), **special needs counsellor** (ESD goal 1, 3, 4, 10), **prevention methodologist** (ESD goal 3, 4, 5, 10, 16) or project manager (ESD goal 4, 9, 17) in all the analysed countries or **environmental education and awareness** (ESD goal 3, 6, 7, 11, 12, 13, 14, 15) or **ICT coordinator** (ESD goal 4, 8, 9) in Czech vocational schools (established voluntary upon head teacher decision).
- There is a lack of quality, authentic training materials on ESD (this is a shared opinion of a larger part of the questioned teachers, experts, and policymakers).
- Possible solutions to this can be found in strengthening cooperation with working life through **internships, authentic learning, visits, and projects**, and through developing teacher's competences of dealing with uncertainty and change. Parallel to this, VET teachers need help in finding trustworthy learning resources and examples of successful pedagogical approaches in the context of VET.

## Heuristic question at the end

*How do these challenges meet the actual structure of the teacher education study plans, where ESD training is not clearly founded, is voluntary, and is not recognised nor rewarded? Could ESD training be mandatory? Wouldn't that contradict ESD principles?*

# EduSTA Researches

## FINLAND – Tampere University of Applied Sciences – Lead partner



**Eveliina Asikainen**

✉ [eveliina.asikainen@tuni.fi](mailto:eveliina.asikainen@tuni.fi)

**Sanna Ruhahti**

✉ [sanna.ruhahti@tuni.fi](mailto:sanna.ruhahti@tuni.fi)

**Hanna Teräs**

✉ [hanna.teras@tuni.fi](mailto:hanna.teras@tuni.fi)

**Jenni Majuri**

✉ [jenni.majuri@tuni.fi](mailto:jenni.majuri@tuni.fi)

## CATALONIA, SPAIN – University of Girona



**Jaume Ametller**

✉ [jaume.ametller@udg.edu](mailto:jaume.ametller@udg.edu)



**Marta Gual Oliva**

✉ [marta.gual@udg.edu](mailto:marta.gual@udg.edu)

## CZECH REPUBLIC – Institute of Education and Communication CZU Prague



**Karel Němejč**

✉ [nemejc@ivp.czu.cz](mailto:nemejc@ivp.czu.cz)



**Barbora Jordánová**

✉ [jordanova@ivp.czu.cz](mailto:jordanova@ivp.czu.cz)

## NETHERLANDS – Hanze University of Applied Sciences



**Petra Cremers**

✉ [p.h.m.cremers@pl.hanze.nl](mailto:p.h.m.cremers@pl.hanze.nl)



**Elles Kazemier**

✉ [e.m.kazemier@pl.hanze.nl](mailto:e.m.kazemier@pl.hanze.nl)

## SWEDEN – University of Gothenburg



**Liisa Uusimäki**

✉ [liisa.uusimaki@gu.se](mailto:liisa.uusimaki@gu.se)



**Susanne Gustavsson**

✉ [Susanne.gustavsson@ped.gu.se](mailto:Susanne.gustavsson@ped.gu.se)