

# *Badge Management Plan*



Academy for  
Sustainable Future Educators



Professional Teacher Education 2025

## Content

|   |    |
|---|----|
| Executive Summary .....   | 3  |
| Introduction.....   | 4  |
| Badge constellation development process .....                                     | 5  |
| Vocabulary .....  | 6  |
| Managing a set of competences in international cooperation .....                  | 8  |
| Cooperation with partners after the project.....                                  | 9  |
| Educator for Sustainable Future - badge constellation .....                       | 9  |
| Competence-based open badges.....   | 10 |
| Introduction of Open Badge Factory .....  | 13 |
| Upgrading your OBF licence to a Pro licence.....                                  | 13 |
| User roles in Open Badge Factory .....  | 13 |
| How to access the Educator for Sustainable Future -constellation.....             | 14 |
| Training the trainers .....   | 15 |
| Open Badge Factory.....   | 15 |
| Networking with TAMK PTE.....   | 15 |
| Receiving the constellation .....   | 16 |
| Application forms.....  | 17 |
| Issuing Sustainable Future Educator -badges .....                                 | 19 |
| Daily email notifications of pending applications.....                            | 20 |
| Automatically issued milestone badges .....                                       | 21 |
| Tips for assessing badge applications .....                                       | 21 |
| Adding an external evaluator .....  | 21 |
| Identification of badge applicants.....   | 22 |
| Revocation of badges issued .....   | 22 |
| Trouble shooting .....  | 23 |
| Taking account of specific groups .....   | 23 |
| Integration of badges in different learning environments .....                    | 23 |
| Support for deployment .....  | 23 |
| Introducing Open Badge Passport .....   | 24 |
| Why Open Badges?.....   | 24 |
| Signing up for Open Badge Passport .....  | 24 |
| OBP Mobile Application.....   | 26 |
| Profile and user account settings of OBP .....                                    | 26 |
| Explore Badges in OBP.....  | 27 |
| Personal settings.....  | 29 |
| The settings of the received badge, in particular the publicity and sharing ..... | 29 |
| Completion of Educator for sustainable future -badges .....                       | 29 |

|  |    |
|--|----|
| Educator for Sustainable Future-badges in Open Badge Passport.....                     | 30 |
| Collecting badges from different organisations.....                                    | 32 |
| Recognition of badges.....   | 32 |
| Connecting Educator for sustainable future -badges to other badge constellations ..... | 32 |
| Further development of the badge constellation.....                                    | 32 |
| References.....  | 34 |

## Executive Summary

This document describes the terms of use of the EduSTA digital open badge constellation after the end of Academy for Sustainable Future Educators – EduSTA Teacher Academies project.

All the contents produced in the project are openly available in the Finnish Open Educational materials library aoe.fi. The badge graphical design, and ownership of issuing EduSTA badges belongs to the project partners and is practically organised via TAMK's Open Badge Factory.

The document describes how the constellation is maintained collectively by the partner organisations of EduSTA and how third parties can gain access to the constellation and become issuers of badges.

The document includes also essential introduction for starting to use the Open Badge Factory.

The document has been agreed by partners in the Project Management Team (14<sup>th</sup> May 2025), and it has been introduced to the Steering Group and Advisory Board (6<sup>th</sup> June 2025) of the project.



### Disclaimer:

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## Introduction

*The Academy for Sustainable Future Educators (EduSTA) is an Erasmus+ -Teacher Academies-funded international project to define practical sustainability competences for teachers. The project has built competence-based digital open badge constellation, curricula and learning materials to strengthen sustainability competences.*

Erasmus+ Teacher Academies will create European partnerships and increase cooperation between teacher training institutions and education providers. The aim is to support teachers in the early stages of their careers and strengthen their professional development. It will promote multilingualism, language awareness, cultural diversity and close international cooperation between teacher education institutions. The EduSTA project, led by the Tampere University of Applied Sciences (TAMK) School of Professional Teacher Education (PTE), has operationalised teacher sustainability competences into practical actions for teachers by building a set of digital open badges, as well as learning materials, studies and learning environments to support the completion of the competences. The competence-based open badge constellation is the most visible outcome of the project. The aim is to provide a set of digital open badges that can be used both as part of professional teacher training and for in-service training and validation of prior learning.

In the project, five European teacher training institutions have jointly developed and tested a digital competence framework for teacher sustainability competences based on research and professional insights (Ametller et al., 2024). TAMK's partners are University of Girona from Spain, University of Gothenburg from Sweden, Hanze University of Applied Sciences from the Netherlands and University of Life Sciences, Prague, Czech Republic. The aim has been to derive from previous rather conceptual definitions of sustainability pedagogy competences (Rounder Sense of Purpose, 2019; Sleurs, 2008; UNECE, 2012;) towards concrete competences can be demonstrated through digital open badges.

The design of the competence framework was based on the idea that competence-based digital open badges are rapidly becoming more common as alternative (micro)credentials become more widespread and as the themes of continuous learning become more widely recognised by different stakeholders. The development of the badge constellation has taken into account national development work on competence recognition (Finnish Government, 2022; 2025) and the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability (European Union, EU, 2022).

The GreenComp Competence Framework, which forms the basis of the badge constellation, defines the competences needed to successfully implement the European Union's Green Transition Programme through four competence areas:

- expressing sustainability values
- managing the complexity of sustainability
- envisioning sustainable futures
- sustainability activities (Bianchi et al. 2022).

The GreenComp competences include, in addition to problem-solving skills (systems thinking, critical thinking, problem framing), the competences that describe the above-mentioned engagement: valuing sustainability, supporting justice, recognising the

importance of nature, investigative thinking, political agency and individual initiative (Bianchi et al., 2022). The importance of sustainability competences in the future working life has also been recognised by the Skills Foresight Forum, where the GreenComp competences were elevated alongside digital competences as key competences (Finnish National Agency for Education, Opetushallitus, 2023).

In all participating countries (Finland, Sweden, the Netherlands, Spain and the Czech Republic), a simultaneous skills mapping and context analysis was carried out, including analysis of educational policy documents, expert interviews and workshops for teachers.

### Badge constellation development process

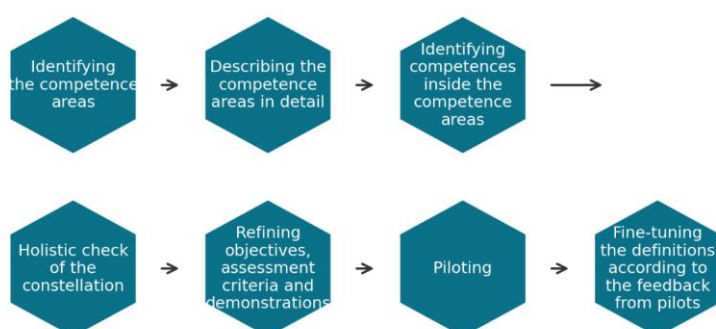


Figure 1: Process diagram for the development of the badges.

As a result, four key areas of teacher sustainability competences were identified: sustainability literacy, sustainability pedagogy, enabling action and reflective work (Ametller Leal et al., 2024). Work continued in the project's multinational teams, which defined the core competences of the competence area and elaborated them into competence-based digital open badges (Teräs et al., 2024). The development process is described in more detail in the EduSTA publications (Asikainen et al., 2024; 2025).

The EduSTA project was implemented for the period 1.6.2022-31.7.2025.

## Vocabulary

We will use the vocabulary compiled [by Competetitive Skills -project](#) (ESF, 2019-2021) (see TIEKE Finnish Information Society Development Centre, TIEKE, 2022).

### **Badge application**

A means of demonstrating competence. Can include e.g. open text fields, multiple choice and file downloads. Can be assessed by the awarding body and retained as evidence of competence.

### **Badge Constellation**

A set of several competences. May contain levels of competence and metabadges. Either created by a single organisation or developed in collaboration.

### **Badge creator**

An organisation that creates a badge in the Open Badge Factory and either awards it itself or distributes it to others for award.

### **Badge earner**

The person to whom the badge is awarded for display.

### **Badge issuer**

The representative of the granting organisation responsible for evaluating the application for the badge.

### **Badge library**

A place to find all the badges created by and copied to an organisation.

### **Badge of participation**

Proof of attendance at an event, not proof of competence.

### **Badge owner**

A person who distributes a badge from their Open Badge Passport for others to see.

### **Badge recipient**

The person to whose email address the token is issued.

### **Criteria**

Information on the competences that the applicant has chosen to be identified (competence objectives), the way in which they have been demonstrated (evidence) and the assessment criteria against which they have been assessed.

### **Description**

A short text about the competences contained in the badge or the competences of the badge earner.

### **Digital open badge**

An electronically shareable proof of competence. Technically, the badge consists of an image and metadata containing information such as the name of the badge, a description,

the criteria for obtaining the badge, who awarded the badge and the dates of award and validity.

### **Digital open badge-driven learning**

A pedagogical model in which badges are used to support competence development and the learning process, as well as to recognise and make visible competence.

### **Evidence**

Supporting evidence of competence. Can be produced through an application and displayed to the badge awarded ex-post.

### **Interface**

A technical solution that allows the data in a badge to be used in other services. See also the Open Badges standard.

### **Issuer of the badge**

The organisation whose Open Badge Factory is awarding the badge.

### **Macro credentials**

Evidence of outcomes from a longer learning experience (e.g. a full degree), assessed against transparent standards. This badge does not include a description of the competences but can link to competence-based digital open badges where the criteria and evidence of competences can be seen.

### **Metabadge**

A badge that has the technical function of shaping a set of badges as a composite badge for information, see also milestone.

**Micro badge** is the smallest unit in the badge hierarchy, representing a specific skill, knowledge or competence. It serves as a foundational element that can be combined with other micro badges to form larger, more comprehensive badges (e.g. milestone badge).

### **Microcredentials**

Evidence of the results of a short-term learning experience assessed against transparent standards.

### **Milestone badge**

A badge that brings together individual competences. Often requires either a specific number of badges or a specific set of badges.

### **Network**

Organisations using the Open Badge Factory with whom it is possible to network. Networking is a prerequisite for the use of shared badges.

### **Open Badge Factory**

A licensing service used by large and small organisations around the world to create, issue and manage Open Badges.



**Open Badge Passport**

A free service for receiving, storing and sharing Open Badges.

**Open Badges standard**

A common technical standard that allows data to be transferred from one system to another using open interfaces see Open Badges 3.0, Comprehensive Learner Record Standard <https://openbadges.org/>

**Reference framework**

The national or international qualification framework, a recommendation on the required competences or a similar broader framework underlying the criteria for the badge.

**Service level**

The Open Badge Factory toolkit, with four levels: free, basic, premium and pro.

**Shared badge application**

A badge application shared with members of your own network, either as a copy or as a link. A shared application can be edited in your own OBF, but a linked application is only updated if it is edited in the organisation it is shared with.

**Testimonials**

Can be testimonials from the organisation awarding the badge and the individual badge, as well as endorsements of the competences of the badge recipient.

**User roles**

The official rights and roles associated with Open Badge Factory badges. These are the issuer, creator and admin.

**Validation**

Recognition and validation of the awarded badge and the competences recorded on it in another organisation.

## Managing a set of competences in international cooperation

Digital open badges are growing in popularity as a motivating and cost-effective way to acknowledge competences acquired in different ways. A commonly agreed management plan will enhance the quality of the badge constellation through common rules of the game. These rules relate, for example, to the assessment of badges and the updating of the badge. The management plan also agrees on how and on what criteria the badge can be shared with others to ensure that the badges can be connected and stacked with other badges (Pakanen & Sandberg, 2023). The management plan describes to new actors what the Sustainable Future Educator -badges are all about and opens the benefits of the badges.

In accordance with the project plan, the visual package of the Educator for Sustainable Future -badges, the competence objectives, assessment criteria and ways of demonstrating competences developed in the international EduSTA project have been published [openly on the project website](#), [on the aoe.fi service](#) and in this management plan, which will be available online [on the page maintained by Tampere University of Applied Sciences](#).

This published content can be freely used by any organisation (CC BY 4.0 <https://creativecommons.org/licenses/by/4.0/>) and can be used as a basis for training or, for example, for building a new set of open badges in any badge management systems, the content and development of which is the responsibility of the organisation. In this case, it is no longer a question of an 'Educator for Sustainable Future' competence-based badges, but of the organisation's own interpretation of badges, a new constellation.

The TAMK PTE, has agreed to manage and maintain the international set of the Educator for Sustainable Future -badges produced in the project. When one body maintains the badge constellation, it is identical for all the bodies awarding the badges, thus ensuring nationwide and international consistency. In this way, the badges awarded with the Educator for Sustainable Future' badges are the same, standardised competences wherever they are awarded.

Maintaining the badge constellation requires work (maintaining and developing the badge set in the Open Badge Factory, distributing badges as links to different organisations, training of trainers, guidance and other customer service). The TAMK PTE will cover these costs by charging an annual fee to the organisations implementing the badge from autumn 2025 onwards.

The Open Badge Factory's linked badges and their badge applications free organisations from having to update the content of the badges and applications. This is a big saving in human resources. TAMK PTE is responsible for the updates, and changes made by TAMK PTE to the Open Badge Factory are automatically updated for all organisations awarding the Educator for Sustainable Future -badges.

### Cooperation with partners after the project

The aim is that the cooperation between the project partners in developing the Educator for Sustainable Future -badges will continue also after the end of the project. This cooperation means that TAMK PTE will not charge the partner organisations of the EduSTA project (Erasmus+ Teacher Academies 2021-2027) an annual fee for the implementation of the competences (shared badge). The need and price of the training of trainers will be agreed separately. In return for the use of the badge, the project partners commit to an annual joint development event on the building sustainable futures. The community will be maintained on the Academy for Sustainable Future Educators LinkedIn profile. An annual webinar on the use of the badge constellation will be organised. The project partners will contribute to the organisation of the webinar.

### Educator for Sustainable Future - badge constellation

A badge is an electronic proof of the recognition of either prior learning or learning acquired through the information sources of the badge. The structure of the badge includes the competence objectives, the assessment criteria and the demonstration of competence. In digital open badge-driven learning (Brauer, 2019), it is important to support the learning of the badge applicant and the possibility to apply the competence in his/her own work by means of short learning experiences.

The metabadge of the Educator for Sustainable Future consists of four competence areas (badge families) and nine microbadges (Figure 1). The badge families describe the different roles of the teacher in strengthening students' sustainability competences. Earning the metacredential of Educator for Sustainable Future requires the completion of six micro-credentials, with performance in all competence areas. This ensures that the competences are broadly demonstrated, while at the same time giving some choice to those who complete the badge. A more detailed description of all the competences can be found in Table 1, Content of the competences.



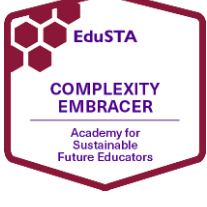

Figure 2. EduSTA competences and badges.





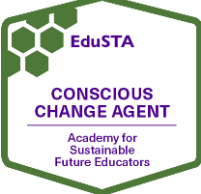
Two competences are required for the Sustainability Literacy badge, as well as two competences for the Learning Ecosystem Design badge. The Enabling Action and Reflexive Praxis badges each require one competence. The Educator for Sustainable Future meta badge is therefore awarded with six competences, representing all the competences as described above. The competences can be completed as part of training, but equally they can be used to demonstrate previously acquired competences. Applicants may complete the badges in any order they wish. These badges are intended for use in teacher education and in-service training at different levels of education.

### Competence-based open badges

The following table shows the content of the open badges:

| Badge | Content of the Open Badges |
|-------|----------------------------|
|-------|----------------------------|

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|  <p><b>EduSTA</b><br/><b>KNOWLEDGEABLE<br/>PROBLEM ARTICULATOR</b><br/>Academy for<br/>Sustainable<br/>Future Educators</p> | <p>Knowledgeable Problem Articulator</p> <ul style="list-style-type: none"> <li>• knows the pillars of sustainable development and the main idea of Education for Sustainable Development (ESD) in their educational context(s)</li> <li>• connects sustainable development and Education for Sustainable Development (ESD) to their own work <ul style="list-style-type: none"> <li>- identifies possibilities and challenges in the implementation of sustainability related content in their educational context and work as a teacher</li> </ul> </li> </ul>  |
|  <p><b>EduSTA</b><br/><b>CRITICAL<br/>DEVELOPER</b><br/>Academy for<br/>Sustainable<br/>Future Educators</p>               | <p>Critical Developer</p> <ul style="list-style-type: none"> <li>• knows and recognises reliable sources of information related to sustainability knowledge</li> <li>• integrates knowledge related to sustainable development, ESD approaches and/or sustainability competence frameworks in teaching practices or curriculum development</li> <li>• evaluates ESD and sustainable development aspects and/or knowledge of sustainability competences in their own teaching practices, educational context, and curriculum</li> </ul>  |
|  <p><b>EduSTA</b><br/><b>COMPLEXITY<br/>EMBRACER</b><br/>Academy for<br/>Sustainable<br/>Future Educators</p>             | <p>Complexity Embracer</p> <ul style="list-style-type: none"> <li>• Identifies and acknowledges the complexity of sustainability issues.</li> <li>• Describes, discusses and reflects on the complexity of his professional practice in relation to sustainability (uncertainties and contradictions) together with colleagues, students and the community.</li> </ul>  |
|  <p><b>EduSTA</b><br/><b>SYSTEMS THINKING<br/>PROMOTER</b><br/>Academy for<br/>Sustainable<br/>Future Educators</p>       | <p>Systems Thinking promoter</p> <ul style="list-style-type: none"> <li>• knows what kind of methods, learning processes, and learning environments support students' comprehension of systems thinking and understands how these can be applied as part of teaching in one's own field.</li> <li>• can design teaching and learning processes and describe how to utilize learning environments and implement learning and assessing methods that help students to identify the components, interconnectedness and complexity of a system and to be aware of uncertainty that results from sustainability-related challenges.</li> </ul> |

|   |   |
|---|---|
|  <p><b>EduSTA</b><br/><b>FUTURES THINKING CATALYSER</b><br/>Academy for Sustainable Future Educators</p> | <p>Futures Thinking Catalyser</p> <ul style="list-style-type: none"> <li>• knows what kinds of methods, learning processes, and learning environments facilitate students' futures thinking in supporting transformative learning.</li> <li>• can design teaching and learning processes and describe how to utilize learning environments, and implement learning and assessing methods that encourage students to become futures literate and strengthen students' abilities to envision alternative futures and envisioning change</li> </ul>  |
|  <p><b>EduSTA</b><br/><b>VALUE AWARENESS SUPPORTER</b><br/>Academy for Sustainable Future Educators</p> | <p>Value Awareness Supporter</p> <ul style="list-style-type: none"> <li>• knows what kinds of methods, learning processes, and learning environments support students' value awareness and understands how these can be applied as part of teaching in one's own field.</li> <li>• can design teaching and learning processes and describe how to utilize learning environments and implement learning and assessing methods that help students to identify, evaluate, and reflect upon their values.</li> <li>• is aware of their own values in terms of sustainability and what they represent as a teacher.</li> </ul> |
|  <p><b>EduSTA</b><br/><b>ACTIVE COLLABORATOR</b><br/>Academy for Sustainable Future Educators</p>      | <p>Active collaborator</p> <ul style="list-style-type: none"> <li>• identifies sustainability challenges relevant to their own educational context, and</li> <li>• finds ways to tackle them through collaborative action.</li> </ul>   |
|  <p><b>EduSTA</b><br/><b>ACTION FACILITATOR</b><br/>Academy for Sustainable Future Educators</p>       | <p>Action Facilitator</p> <ul style="list-style-type: none"> <li>• creates to their own students learning opportunities where they can take initiative and practical action to promote sustainability together with relevant collaborators.</li> </ul>  |
|  <p><b>EduSTA</b><br/><b>CONSCIOUS CHANGE AGENT</b><br/>Academy for Sustainable Future Educators</p>   | <p>Conscious Change Agent</p> <ul style="list-style-type: none"> <li>• articulates and reflects on their position as a change agent in their educational context with informed understanding of how societal factors affect the realisation of Education for Sustainable Development in their educational context</li> <li>• maintains hopefulness and considers emotions when anticipating and influencing changes for ESD.</li> </ul>   |

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A badge is automatically issued when all the required badges have been completed. An email is then automatically sent to the badge recipient, allowing them to accept the badge into their Open Badge Passport (<https://openbadgepassport.com/>). These technical metabadges are expressed as a composite/level/milestone badge for the badge earner along the learning pathway.

The milestone is always awarded by the organisation where the last individual microbadge required for the metabadge was completed.

## Introduction of Open Badge Factory

Issuers of the Sustainable Future Educator -badges must obtain the Open Badge Factory's highest service level Pro licence. The Open Badge Factory (OBF) licence is purchased [online](#). A 60-day free trial period is available for those who wish to familiarise themselves with the system. The trial licence is Premium and cannot be used with a shared badge, but must be upgraded to Pro.

Competence-based badges and related badge applications can only be distributed as links to Pro licence holders. Changes made to badges are automatically updated only for those operators who have received the badges as links.

Check out the Open Badge Factory licences [here](#)

### Upgrading your OBF licence to a Pro licence

If your organisation already has an Open Badge Factory licence (free, basic or premium), you will need to upgrade to a Pro licence.

The current license can be checked in Open Badge Factory with the Admin credentials of the organization under **Admin Tools -> Service Subscription -> Current Service Level**.

### User roles in Open Badge Factory

Open Badge Factory can have three levels of user roles, depending on the needs of the organisation:

- **Admin** - usually the subscriber of the service, i.e. the first user. Admin rights are used to manage the subscription, environment settings and users and their roles. With the Admin role, a person can also act as a creator and issuer.
- **Creator** - can create, edit and delete badges and associated images, criteria page and email message templates. In the creator role, the person can also act as a badge issuer and view reports.
- **Issuer** - can award badges and review reports.

In addition, there is **an assessor** involved in the process, who does not have a separate role. The assessor may be an admin, a creator, an awarding body or, where appropriate, an additional or peer assessor external to OBF.

Check out the roles and other guidelines for the Open Badge Factory [here](#).

### How to access the Educator for Sustainable Future -constellation

The organisation must have an Open Badge Factory Pro licence. After networking in the OBF, TAMK PTE will distribute the badge and its badge applications as links to the networking organisation, which will make a few final adjustments in its own OBF. The organisation will then be ready to award the Sustainable Future Educator -badges.

In order to be receive the Sustainable Future Educator-badges, an organisation must have at least two trained trainees and Sustainable Future Educator - peer mentors who have completed the Educator for Sustainable Future -badges.



Figure 1: Process flow diagram for the awarding body of the badges (adapted from TIEKE, 2022)

## Training the trainers

Training of trainers, provided by TAMK PTE, will be organised to support the introduction of the badge management. The training of trainers is specifically targeted at the assessors of the competences. The aim is to harmonise assessment practices and contribute to ensuring the quality of competences. Training of trainers can also help to create a climate of trust, whereby different organisations awarding the same badge can rely on the quality of badges awarded by others (Pakanen & Sandberg, 2023).

The training aimed for instructors and admins provides both the competence to assess and award the badges and basic knowledge and skills about the badges, the Open Badge Factory, the Open Badge Passport and the content of the Sustainable Future Educator badge constellation. The aim of the training is that participants will understand the process of digital open badge-driven learning and will be able to use the related systems, including the technical aspects. The broader objective is that participants will understand the potential of the badges for continuous learning. The training of trainers is open to all those interested in the implementation of the Sustainable Future Educator -constellation and peer mentoring.

The training of trainers qualifies them to award the Sustainable Future Educator-badges and thus enables the performer's organisation to qualify for the badge. At least one person from the organisation awarding the badges must complete the training of trainers and the Educator for Sustainable Future competence areas including the badges. The qualification is verified by providing TAMK PTE with a link to the trainer training certification badge when ordering the shared badge constellation.

## Open Badge Factory

To be eligible for the Sustainable Future Educator -badge constellation, the awarding organisation must hold an Open Badge Factory Pro licence. Only Pro license holders can have their badges and related badge applications distributed as links, so that any changes made by TAMK PTE to the badges and applications are automatically updated to the badge issuers.

## Networking with TAMK PTE

Once your organisation has a trained trainer and a valid Open Badge Factory Pro licence, it's time to network with TAMK PTE (and other organisations). This is done as follows:

- Login to Open Badge Factory with your organisation's Admin credentials
- Select **Network** from the top menu
- Click **Add a new partner**
- Type "Tampereen ammattikorkeakoulu" in the search field or click on the name to select Tampereen ammattikorkeakoulu directly from the list.
  - You can still open the details of the organisation and click on Request a referral from this partner
- An email notification is sent to TAMK PTE when a request for a recommendation is received (not for networking only).



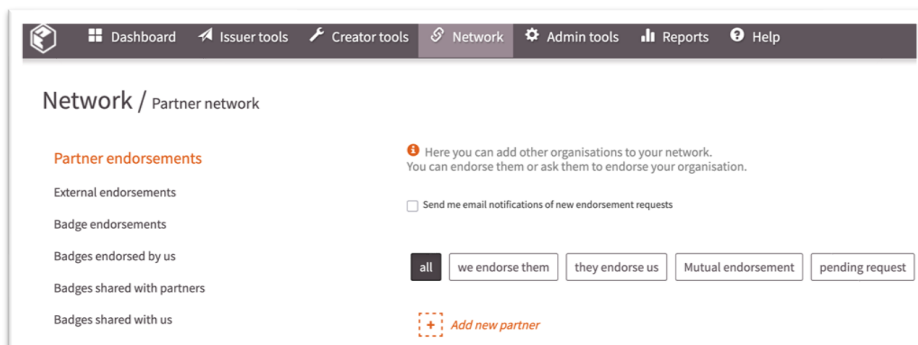


Figure 9. Partner endorsement notification

TAMK PTE recommends all international awarding bodies for the Sustainable Future Educator -badges.

The TAMK PTE distributes the meta-badges of the badge constellation as links to the organisation. The metabadges are accompanied by individual badges and badge applications

- Accept the badges and badge applications distributed as links
- Finish your OBF according to the guidelines provided in this management plan
  - Create a message template for badge applications
  - Activete badge application forms.

The Issuer role is sufficient to assess and issue the badges.

### Receiving the constellation

The badges will be displayed in OBF under **Network - Badges shared with us**

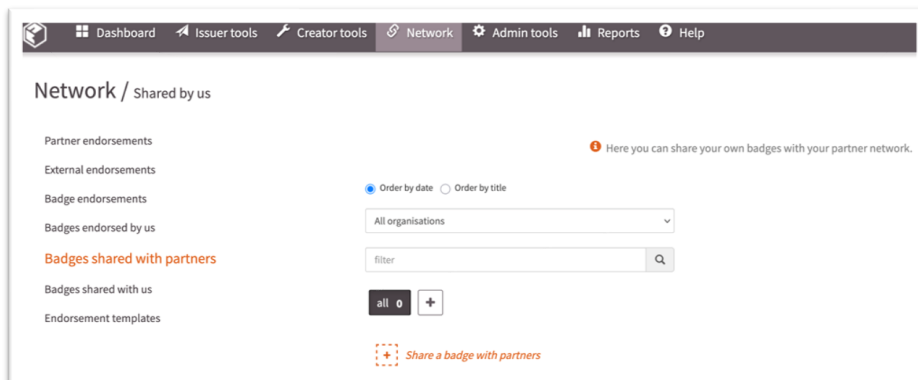


Figure 10: Location of the shared badges in the OBF

**NOTE!** This means that the badges are not displayed in the organisation's badge library, which displays badges created by the organisation itself.

To receive the shared badge, open it and click **the Accept button**.

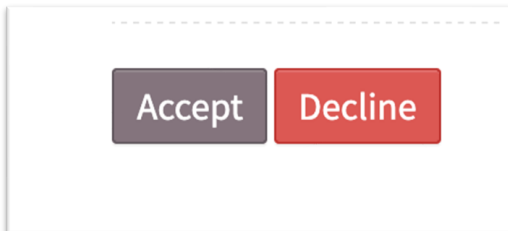


Figure 11: Approval of a shared badge

Accept all the badges distributed to your organisation in the same way.

The basic (micro-level) badges of the Sustainable Future Educator will then be ready for issuing, as long as you update the application forms according to the instructions.

### Application forms

The distribution of the shared badge is finalised by updating the organisation's details on the application forms and activating the badge applications.

The badge applications shared to your organisation can be found in the **Creator Tools** view, where you can select **Badge Applications** from the left-hand side.

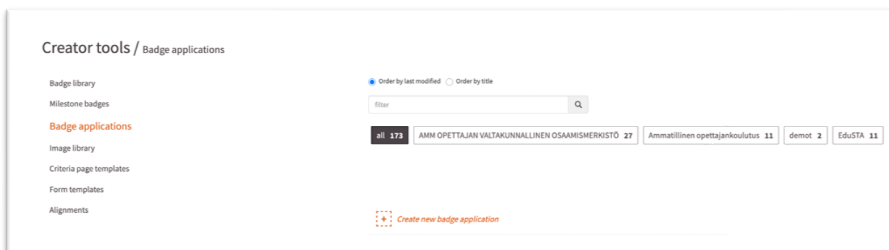


Figure 12: Badge applications in the OBF

To open the desired badge application in edit mode, click on the badge and select **Edit**.

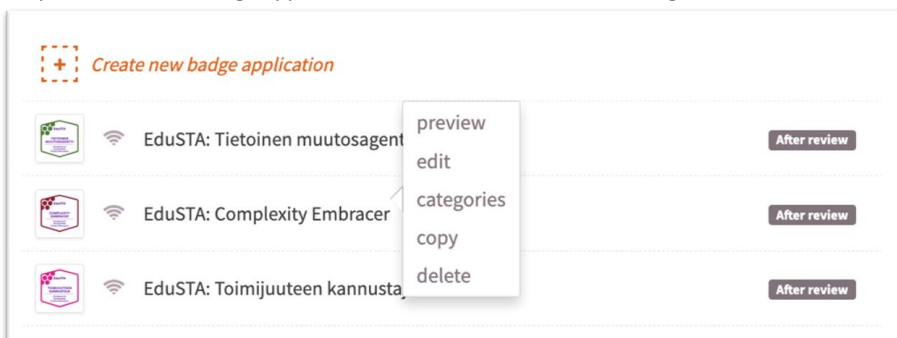


Figure 23: Editing a badge application

Usually, creating a badge application is a six-step process.

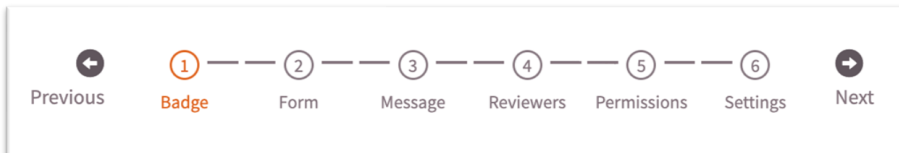


Figure 14: The six steps of creating a badge application

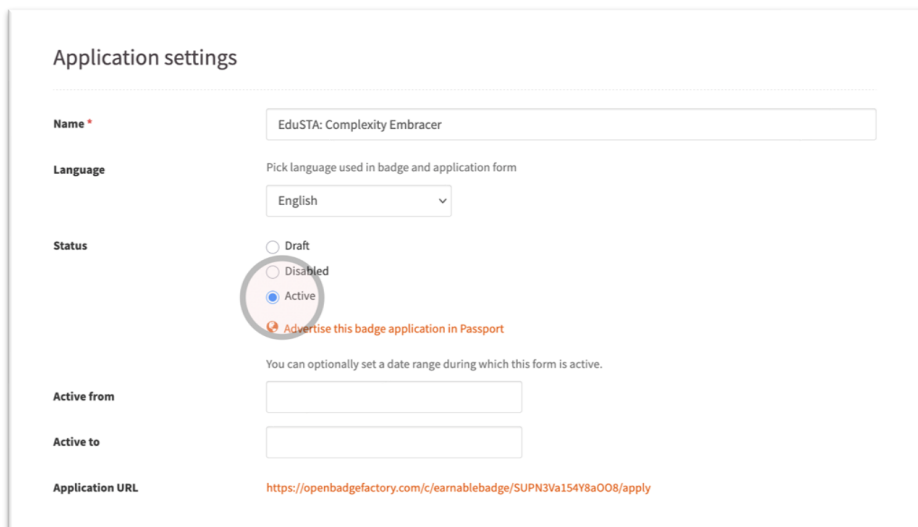
For a linked badge application, only sections 3 to 6 are editable. In sections 1 and 2 you will see the instructions for the badge assessor and the application form fields, but you will not be able to edit them. When TAMK PTE updates a badge application, the changes are automatically updated for everyone to whom the badge application has been shared as a link.

Go to section **3 Message** in the editing section of the application for a badge.

Figure 15: Updating contact details in the message template

Update the text of the email notification sent to the recipient of the badge. In particular, you should update the **bottom part of the message**, i.e. your organisation's details as the sender of the message. The message can be saved as a template so that the same message can be used for all badge applications.

Then go to section **6 Settings**, where you can open the application for a badge as active, i.e. to be applied for.



The screenshot shows a web form titled "Application settings". It contains several fields: "Name" with the value "EduSTA: Complexity Embracer", "Language" set to "English", and "Status" with three radio button options: "Draft", "Disabled", and "Active". The "Active" option is selected and circled in red. Below the status options is a link that says "Advertise this badge application in Passport". There are also fields for "Active from" and "Active to" dates, and an "Application URL" field containing a long URL.

Figure 16: Opening a badge application as active

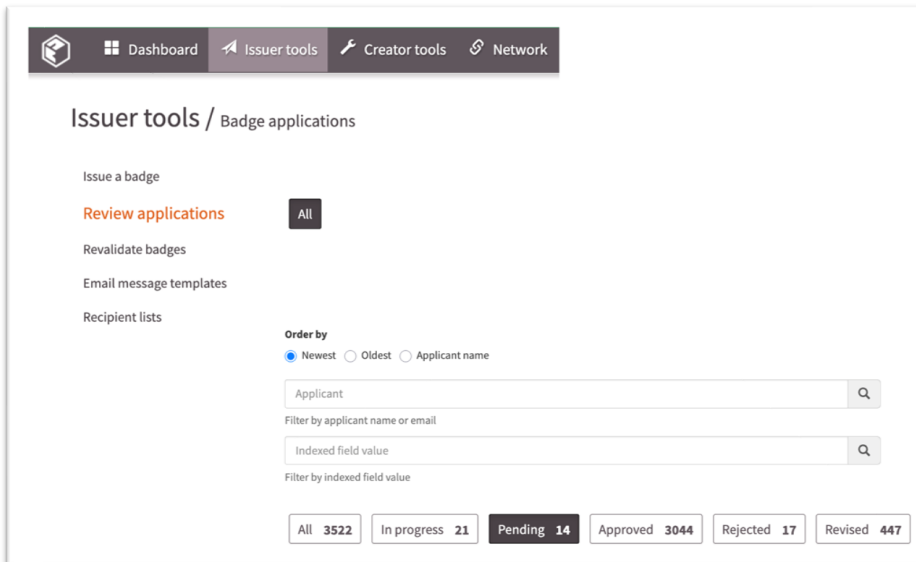
Change the **status** of the badge to **Active**.

This will activate the URL of the application and you can now share this link with the applicants. The embed code and QR code will also be activated. You can also define a page to which the applicant will be redirected after submitting the badge application.

Finally, click **Save**. Do the same for all the badge applications you have been allocated.

## Issuing Sustainable Future Educator -badges

Once the badges have been enabled, you will see the applications you have received in the **Issuer Tools**. From the left-hand side, select **Review applications**.



Issuer tools / Badge applications

Issue a badge

**Review applications** All

Revalidate badges

Email message templates

Recipient lists

Order by

☒ Newest ☐ Oldest ☐ Applicant name

Applicant

Filter by applicant name or email

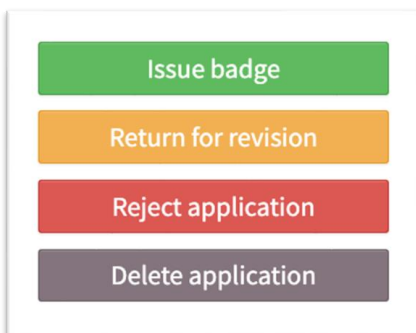
Indexed field value

Filter by indexed field value

All 3522 In progress 21 Pending 14 Approved 3044 Rejected 17 Revised 447

Figure 7: Applications for badges to be assessed

When you open an individual application for assessment, you will see the assessor's instructions at the top. Go through the application form and use the buttons at the bottom to grant or reject the badge. If necessary, you can also return the application for completion or delete it completely.



Issue badge

Return for revision

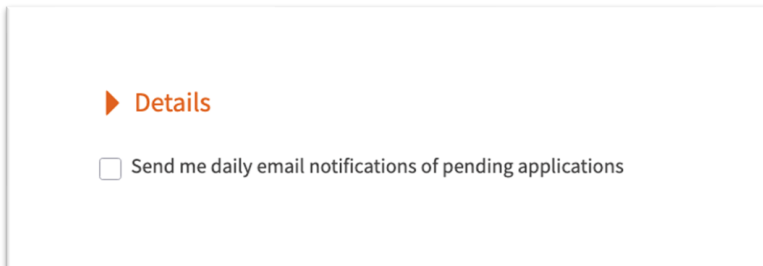
Reject application

Delete application

Figure 18: Acceptance, refusal or supplementation of a badge application

### Daily email notifications of pending applications

If you want to be notified by email when you receive an application to review, select the badge you want to activate from the right-hand side of the **Issuer Tools** screen. This will activate **the Details command** for that badge. Below it, you can enable email notifications.



► Details

☐ Send me daily email notifications of pending applications

Figure19: Ordering an email notification of a badge application

**NOTE!** The email notification will be sent to the email address you are logged in to OBF with at the time of the transaction.

### Automatically issued milestone badges

Metabadges are automatically awarded to those who have completed all milestones and the other required microbadges have been successfully completed.

If a badge earner completes the Sustainable Future Educator -badges in more than one organisation, the metabadge is always awarded by the last issuer organisation in the pathway.

### Tips for assessing badge applications

We recommend the organisation to build a model for situations where a request for a supplement to the application for a badge is submitted or the badge application is rejected. This makes sense for the badge holder to study the subject further, rather than making unnecessary "guesses" in the hope of approval.

For example, the organisation may have instructions that applicant may reapply for the badge one week after the previous application.

### Adding an external evaluator

By default, applications will be reviewed by registered users in your environment. In the first instance, we recommend using the badges through a shared badge constellation, where the organisation that actually assesses the badge is the one that awards it. This is also the default for OBF badge applications.

However, EduSTA partners have the possibility to award badges for a limited period (1.8.2025-31.7.2026) in the role of external evaluator. In this case, a request for an external evaluation is submitted to TAMK PTE (e-mail [edusta.tamk@tuni.fi](mailto:edusta.tamk@tuni.fi)), which will submit a new application for the badge in question, for which external evaluators will be appointed. Applications for these badges will be evaluated on the basis of an e-mail address. It is important to note that the external evaluator does not have access to the management of the badges/badge applications, the OBF tools for interactions with the applicant or the performance statistics in OBF, but all communication takes place in an email conversation.

Commented [SB1]: [@Eveliina Asikainen \(TAMK\)](#) via what, to whom?

Commented [SB2R1]: It's not even worth putting this as an attachment. It's as simple an evaluation post as it gets. Is it clear now that it doesn't give you any data, statistics or data?

Commented [E(3R1): could we use here the e-mail [edusta.tamk@tuni.fi](mailto:edusta.tamk@tuni.fi) [@Sanna Bratner \(TAMK\)](#) if an e-mail address is needed.

TAMK PTE is under no obligation to provide additional information, statistics or data from the main OBF to external evaluators.

## Identification of badge applicants

It is the responsibility of the awarding organisation to identify the applicant/recipient of the badge. This identification is carried out in accordance with the organisation's own procedures.

In principle, identification is easy when it involves the organisation's own students or employees. If applications for badges can be made without the applicant being present, for example to verify previously acquired skills, the organisation should build up good practices to verify the identity of the applicant.

This is built on trust, as the applicant identifies themselves with a personal email address (which can be linked to their Facebook, Google or LinkedIn account).

## Revocation of badges issued

If an organisation discovers that a badge(s) has been issued for the wrong reasons or to the wrong person, or the badge holder requests that their details be removed, the badge can be revoked from the Open Badge Factory.

This is done under **Reports - Recipients**.

Figure 20: Searching the OBF for information on the badge recipient

Find the right person by entering an email address **Filter by email address**. And click to open the badge data.

| Issued on  | Expires | Issued by            | Status   |          |          |       |
|------------|---------|----------------------|----------|----------|----------|-------|
| 03/27/2025 | -       | sanna.braver@oulu.fi | Accepted | ✗ Revoke | ✗ Resend | 📄 PDF |

Figure 21: Details of the badge

Select the correct badge earner and click **revoke**.

This user's badge will be revoked. Do you wish to continue? The operation cannot be undone.

Cancel OK

Figure 31: Acceptance of the cancellation of a badge

Confirm the cancellation of the badge.

## Trouble shooting

If an organisation issuing badges is found to have misused the badges, the organisation should contact TAMK PTE, preferably by email at [edusta.tamk@tuni.fi](mailto:edusta.tamk@tuni.fi)

## Taking account of specific groups

Special groups may be considered, for example, reading difficulties and people with an immigrant newcomer background. Efforts have been made to make the materials related to the badges accessible.

## Integration of badges in different learning environments

The Open Badge Factory can be integrated into some e-learning environments. The integration of the badges themselves is fully possible and allowed, if the linked badges are automatically updated by the integration.

Applications for badges will also be distributed as links to authorised organisations. In order to keep the badge applications up to date with updates, e-learning environments should use links to the badge applications. Therefore, badge applications should not be implemented using tools such as the e-learning environment's own tools (e.g. Moodle Exam Tool).

TAMK PTE is not responsible for the integrations. If necessary, you can get help from your system supplier and the Open Badge Factory.

## Support for deployment

TAMK PTE will provide guidance on the implementation of the Open Badge Factory and the Sustainable Future Educator -badge constellation, if needed.

You can send questions by email to [edusta.tamk@tuni.fi](mailto:edusta.tamk@tuni.fi).



## Introducing Open Badge Passport

The Open Badge Passport is a free cloud service for the user, the badge earner, which can be accessed via a web browser or mobile app. Passport allows users to receive and publish badges, search for badges and users, and increase the value of their badges through new evidence and referrals from other users.

Users can make their competence visible by sharing their earned badges as links, as files (Europass <https://europass.europa.eu/fi>) or as shares on social media services (e.g. LinkedIn, Facebook).

### Why Open Badges?

Competence-based open badges can be used to identify and recognise competences acquired in different ways. They describe what kind of competences can be developed, for example as part of education and training, or what kind of competences are expected by working life. They make it easy to outline an individual learning pathway. The pedagogical model supports collaborative and self-regulated learning. Competence-based badges support personalisation of learning and, combined with flexible ways of developing competences, allow for different ways of progressing. The digital open badge-driven learning process is often also gamified, which supports student motivation.

Assessment models based on individual learner performance are not directly suited to collaborative knowledge building and learning in networked, social communities. Public recognition encourages people to use their skills, to see new opportunities and to grow as experts. Digital open badges are therefore an excellent tool to support transitions from one level of education to the next and onwards into working life. In the world of work, they provide a broader indication of the competences of the badge earner than certificates, thus supporting recruitment, employment and career progression.

### Signing up for Open Badge Passport

Open Badge Passport is a free and easy-to-use service where you can receive and store Open Badges, and share them with whomever you want, whenever you want. Register for the Open Badge Passport (OBP) here: <https://openbadgepassport.com/1etusivu/>

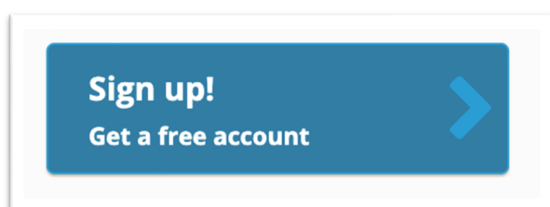
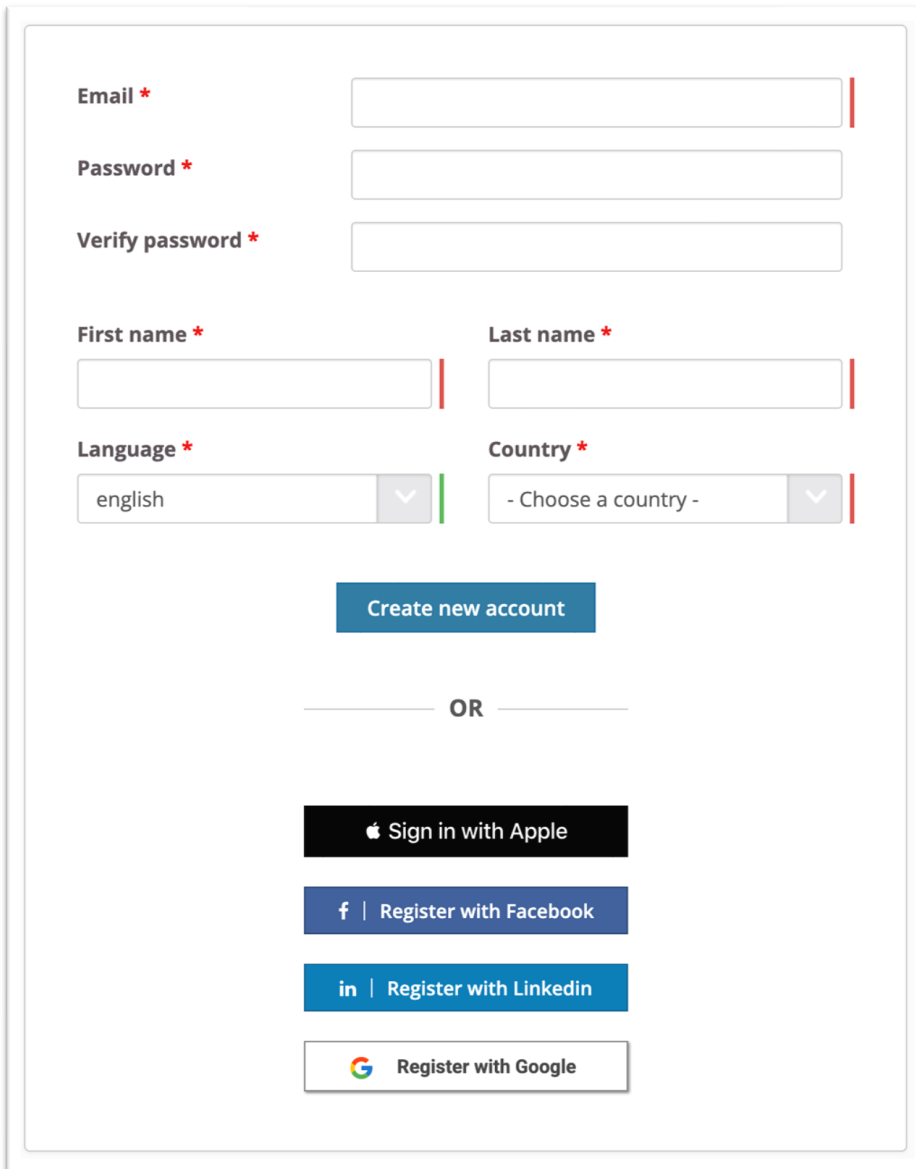


Figure 43: Start registering with OBP

Read and accept the terms of use



The form is titled "OBP registration options" and is enclosed in a light gray border. It contains several input fields and buttons. At the top, there are three stacked input fields for "Email \*", "Password \*", and "Verify password \*". Below these are two input fields for "First name \*" and "Last name \*". Further down are two dropdown menus for "Language \*" (currently showing "english") and "Country \*" (currently showing "- Choose a country -"). A blue button labeled "Create new account" is positioned below the dropdowns. Below this button is a horizontal line with the text "OR" in the center. Underneath the line are four buttons for social media registration: "Sign in with Apple" (black), "Register with Facebook" (dark blue), "Register with LinkedIn" (blue), and "Register with Google" (white with a Google logo).

Email \*

Password \*

Verify password \*

First name \*

Last name \*

Language \*

Country \*

english

- Choose a country -

Create new account

OR

Sign in with Apple

Register with Facebook

Register with LinkedIn

Register with Google

Figure 54: OBP registration options

Registration options 1) Create an account 2) Facebook 3) LinkedIn 4) Google

In the future, login according to the registration method:

Email

Password

Login

[Create new account](#)   [Request new password](#)   [Can't reset password?](#)

OR

Sign in with Apple

Login with Facebook

Login with LinkedIn

Login with Google

---

**Login with your institution**

My institution

Type in the name of the organisation you are affiliated with.

Figure 65: Logging in to OBP

### OBP Mobile Application

Open Badge Passport is also available as a mobile app, which you can download free of charge from your phone's app store. The mobile app allows you to do all the same things as the browser version of the Passport.

### Profile and user account settings of OBP

The email address is used as a unique identifier in OBP, so it must be personal.

In OBP, you can also add multiple email addresses to your profile if you wish. This is done under **User /Account settings**.

| Email | Verified | Actions   |
|-------|----------|---|
|       | ✓        | Primary address   |
|       | ✓        | <a href="#">Delete</a>   <a href="#">Set as primary address</a> |
|       | ✓        | <a href="#">Delete</a>   <a href="#">Set as primary address</a> |

Add new email address

[Add](#)

Figure 76: Email address management in OBPs

In OBP, you can also edit your profile information, such as profile picture, introduction and location information. This is done under **Profile - Edit profile**.

**PROFILE**  
**PAGES**  
**FILES**  
**OBJECTIVES**

My profile

+

1. Content

2. Theme

3. Settings

4. Preview

Save

Save and close

Figure 87: My profile in OBPs

## Explore Badges in OBP

Country:

Finland

Hide advanced search

Keywords:

EduSTA

Badge name:

EduSTA

Earned:

Search by recipient

Issuer:

Search by issuer

Order:

☒ by date issued
 ☐ by name
 ☐ by issuer name

Figure 28: OBP gallery and searching for badges by badge name

Country: Finland

Hide advanced search

Keywords:

Badge name: Search by badge name

Earners: Search by recipient

Issuer: Tampereen korkeakoulu yhteisö - Tampere Universities

Order: ☒ by date issued ☐ by name ☐ by issuer name

☐ Show badges issued by users






|   |  |  |  |   |
|---|--|--|--|---|
|  <p><b>Mielen hyvinvointia tukeva yksilöohjaaja</b><br/>Tampereen korkeakoulu yhteisö - Tampere Universities<br/>28 recipients</p> |  <p><b>Monimutkaisuuden ymmärtäjä</b><br/>Tampereen korkeakoulu yhteisö - Tampere Universities<br/>143 recipients</p> |  <p><b>Oman mielen hyvinvoinnin vahvistaja</b><br/>Tampereen korkeakoulu yhteisö - Tampere Universities<br/>34 recipients</p> |  <p><b>AmO Arviointiosaaminen</b><br/>Tampereen korkeakoulu yhteisö - Tampere Universities<br/>103 recipients</p> |  <p><b>Verkko-opetuksen suunnittelu ja toteutus</b><br/>Tampereen korkeakoulu yhteisö - Tampere Universities<br/>14 recipients</p> |
|---|--|--|--|---|

Figure 29: OBP gallery and search for badges by issuer

Explore in OBP and comprehensive searches can also be found on the Open Badge Passport mobile app:

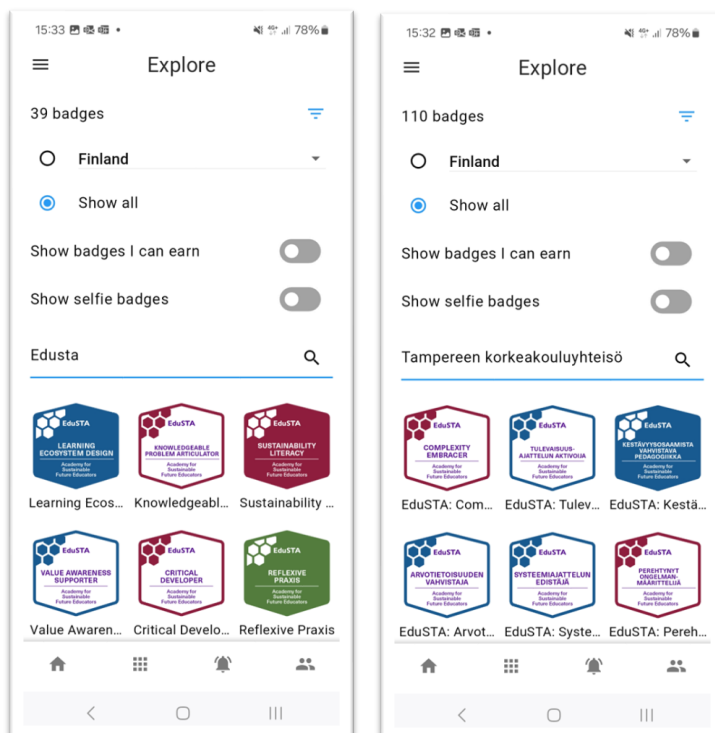


Figure 30 and 31: OBP mobile app and search for badges by issuer

## Personal settings

The settings of the received badge, in particular the publicity and sharing

It is a good idea to make your badges public to get the most out of them.

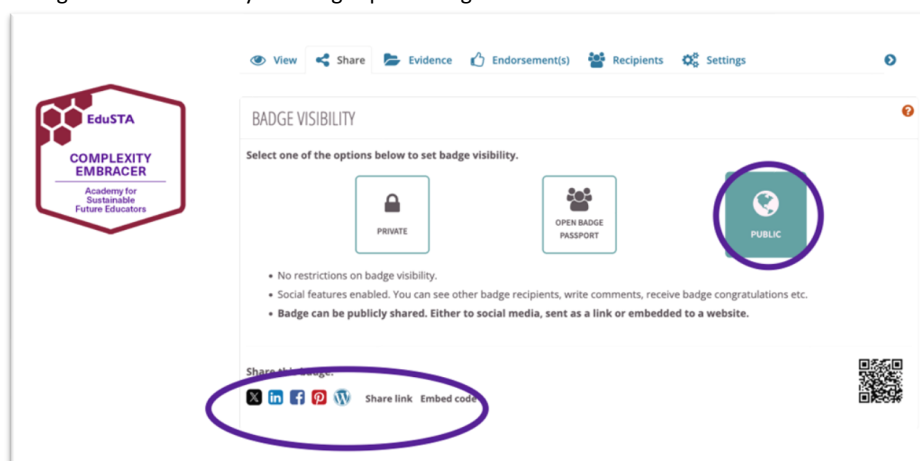


Figure 92: Visibility settings for the badge

Once the badge is open to the public, it can be shared on social media channels or as a link to other people.

## Completion of Educator for Sustainable Future Badges

Open digital badges are a way of demonstrating your competences in line with international frameworks.

You apply for a badge to have your competences assessed. You can apply for badges as part of your training, after self-study, or by demonstrating previously acquired skills.

An up-to-date list of organisations awarding the Sustainable Future Educator -badges can be found on the website of TAMK PTE.

To receive a badge, you need to register for [the Open Badge Passport](#) - a free cloud service or mobile app where badges are collected. You can apply for a badge according to the instructions of the institution or organisation issuing the badge. There may be a cost to complete a badge, check with the organisation awarding the badge for the price.

The process for completing the competence-based badges is described below as an instructional process.

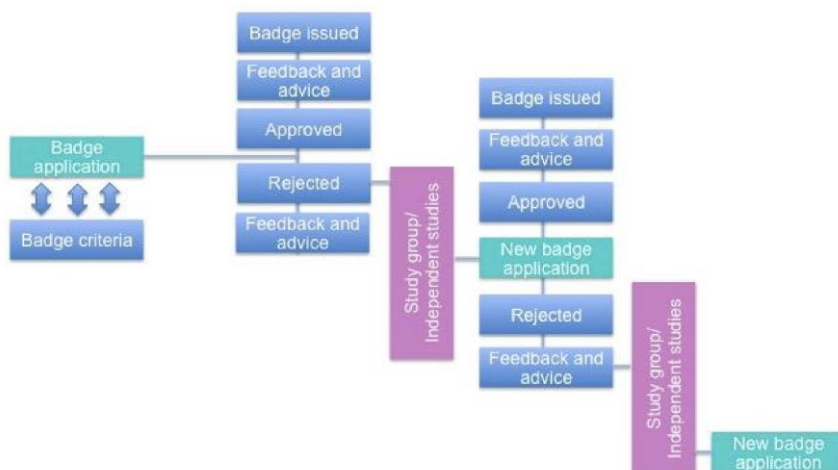


Figure 103: Structure and components of a digital open badge-driven learning process: competence-based assessment and badge management related to guidance (Brauer & Siklander, 2017).

### Educator for Sustainable Future Badges in Open Badge Passport

In Open Badge Passport, you can view your own badges or search for badges in the Gallery. The Educator for Sustainable Future -badges can be easily found in the Gallery by entering the name of an individual badge or a keyword in the index.

#### Information on a single badge

When you open a single badge in the Gallery, you can see a lot of different information about it. For example, Complexity Embracer (on the next page).



View Share Evidence Endorsement(s) Recipients Settings

## EDUSTA: COMPLEXITY EMBRACER

Issued by: Tampereen korkeakouluyhteisö - Tampere Universities

Issued on: 7.5.2025

Earned by: Sanna Brauer

A Complexity Embracer is aware of and acknowledges complexity in their professional/daily practice. They discuss and reflect upon uncertainties and contradictions with colleagues, students, and the community.

[Check this badge...](#)

### CRITERIA

#### Competence objectives

Complexity Embracer

- identifies and acknowledges the complexity of sustainability issues
- describes, discusses and reflects on the complexity of their professional practice in relation to sustainability (uncertainties and contradictions) together with colleagues, students and the community.

#### Assessment criteria

The badge recipient is able to

- design and facilitate conversations with peers, students, and/or the community about the complexities of sustainability issues, identifying worldviews, assumptions, and values on sustainability issues
- identify opportunities to support reflection of complexity include elements of critical and reflective dialogical techniques and methods to create holistic broader perspectives on complex sustainability issues
- use (including elements of) critical and reflective dialogical techniques and methods to create holistic broader perspectives on sustainability issues
- identify key moments in conversations where openness, curiosity, change and growth are at stake
- reflect and justify their choices in the terms of embracing complexity.

#### Competence demonstration

Deliver a learning journal (max. 2 pages) of a conversation which you designed and facilitated that supports understanding of holistic broader perspectives on complex sustainability issues.

In your learning journal describe a conversation situation where you have consciously embraced complexity when discussing a sustainability issue with colleagues, students, or members of a community.

- Explain what was the community or group, participants, situation, topic, and approach.
- Describe how you promoted openness and embracing complexity during the conversation.
- Reflect on how you supported the formation of a broader, more holistic perspective on sustainability.
- Evaluate your own role as the facilitator of the discussion. What worked well? How could the quality of the dialogue be improved further?

Ensure that your demonstration of competence meets all the assessment criteria for the digital badge. You can make use of the learning resources listed below and prior competences you have previously acquired.

When applying for a badge, return a link to a shared online document (e.g., Word/OneDrive, Google Document/Google Drive) where you demonstrate the competence required for the badge.

Figure 114: Basic information on the badge

The **info** tab shows not only the information about the issuer and creator of the badge, but also the criteria for the badge.



View Share Evidence Endorsement(s) Recipients Settings

Other recipients: 0

Figure 125: Statistical information on badges received



**Tabs** display statistics on the number of recipients, testimonials, reviews, etc.

**The Recipients** tab shows the details of the recipients who have set the badge as public (recommended, see Received badge settings, especially Publicity and sharing badges)

## Collecting badges from different organisations

When a person completes the Educator for Sustainable Future -competence-based badges from more than one organisation, they will always receive a metabadge from the organisation where they completed the last required metabadge.

## Recognition of badges

The Sustainable Future Educator is one of the first international badging schemes. It is intended for use by a wide range of school levels and a wide range of actors. The international use of these incentives will raise awareness of the badges.

The key to the quality of the alternative credential is the information content, the metadata, attached to the badge. The quality of the Educator for Sustainable Future -badges has been ensured by formulating clear competence objectives and assessment criteria in cooperation with the EduSTA project network. This, together with the mutual recommendations of the network of developers using the badges, will contribute to their acceptance in different curricula.

We hope that the badges in general will increase their visibility and this will promote smooth ways of integrating digital open badges into broader learning modules.

## Connecting Educator for sustainable future -badges to other badge constellations

The newly developed constellation can also be used as part of other competence-based sets. The modular structure ("stackability") of the badges supports the accumulation and integration of micro-credentials, small achievements, into broader competences. Technically, the badges are based on the international Open Badge standard (<https://openbadges.org/>), which allows for open interfaces (APIs), together with rich content description data, to allow for the subsequent addition or integration of a set of competences into other systems.

It is worth noting that incorporating a set of badges into a new badge constellation requires the whole set to be structured as milestones with the new metabadge in the OBF system.

## Further development of the badge constellation

TAMK PTE is responsible for the development of the badge constellation as the technical administrator of the set. The initial project network will be responsible for the content of the constellation for a period of five years. If a single language version is not updated for two years, it will be placed in the archive. The network may also create new language versions by contract. TAMK PTE maintains the badges in English, Swedish and Finnish.

New competences can be proposed for inclusion in the badge constellation. In this case, the first point of contact should be the TAMK PTE contact person, who can provide more detailed guidance on how to develop a badge.

New incentives will then be developed in cooperation with the EduSTA project network and other stakeholders interested in the development of the constellation. The aim of this cooperation is to make extensive use of the project outputs. TAMK PTE openly invites those interested in development to join the network when development work is relevant.

The contact persons for the competences on 1.6.2025 are:

Lecturer **Eveliina Asikainen** Tampere University of Applied Sciences,

[eveliina.asikainen@tuni.fi](mailto:eveliina.asikainen@tuni.fi), tel. +358505958775

Lecturer **Sanna Brauer**, Tampere University of Applied Sciences,

[sanna.brauer@tuni.fi](mailto:sanna.brauer@tuni.fi), tel. +358504768389

TAMK PTE is responsible for updating the contact details on the website. The members of the original project network will nominate their representatives to the steering group for further development and will thus be involved in deciding on the inclusion of new badges and the updating of old ones in the constellation. The project partners commit to an annual joint development event on the Educator for Sustainable Future -constellation. The event will be convened by TAMK PTE. The event will be conducted online. TAMK PTE will also maintain the EduSTA LinkedIn profile.

## References

- Ametller Leal, J., Asikainen, E., Gual Oliva, M. & Nemejc., K. (2024). Teacher Training for Education for Sustainable Development: Developing a Shared Competence Framework. Czech University of Life Sciences Prague. <https://urn.fi/URN:NBN:fi-fe2024092574790>
- Asikainen, E., Ruhalahti, S., Teräs, H. & Brauer S. (2024). Kestävän tulevaisuuden osaamisen rakentajaksi osaamismerkkien avulla. AMK-lehti/UAS-journal, 14(4). <https://urn.fi/URN:NBN:fi-fe2024112696764>
- Asikainen, E., Uusimäki, L., Ruhalahti, S., Teräs, H., & Brauer, S. (2025). Combining Education for Sustainable Development and Digitalisation Innovatively to Develop Teacher Education in EduSTA Erasmus+ Teacher Academies Project. Käsikirjoitus hyväksytty julkaistavaksi.
- Bianchi, G., Pisiotis, U., & Cabrera Giraldez, M. (2022). *GreenComp – Eurooppalainen kestävän kehityksen osaamiskehys*. Euroopan unionin julkaisutoimisto. Luxemburg. <https://dx.doi.org/10.2760/595099>
- Brauer, S & Purhonen, K. (2025). Valtakunnallisten osaamismerkkien kehittäminen. Käsikirjoitus.
- Brauer, S. & Siklander, P. (2017). Competence-based assessment and digital badging as guidance in vocational teacher education. In H. Partridge (Ed.), *Me, Us, IT! Proceedings ASCILITE2017: 34th International Conference on Innovation, Practice and Research in the Use of Educational Technologies in Tertiary Education*. 191-196.
- Euroopan Unioni, EU. (2022). Proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability. <https://www.consilium.europa.eu/en/press/press-releases/2022/06/16/council-recommends-european-approach-to-micro-credentials/>
- Opetushallitus. (2023). Laaja-alainen osaaminen 2030-luvulla. Laaja-alaisten osaamistarpeiden kehitys vuoteen 2030 mennessä. Osaamisen ennakointifoorumin 2021–2024 tuloksia. Raportit ja selvitykset 2023:1. Opetushallitus. [www.oph.fi/fi/tilastot-ja-julkaisut/julkaisut/laaja-alainen-osaaminen-2030-luvulla](http://www.oph.fi/fi/tilastot-ja-julkaisut/julkaisut/laaja-alainen-osaaminen-2030-luvulla).
- Pakanen, L. & Sandberg, M. (2023). Digitaaliset osaamismerkit – opas merkityön perusteisiin <https://urn.fi/URN:NBN:fi-fe2023032433087>
- Rounder Sense of Purpose. (2019). A rounder sense of purpose: Educator competences in learning for sustainability. [https://aroundersenseofpurpose.eu/wp-content/themes/rmwrk/documents/RSP\\_Competences.pdf](https://aroundersenseofpurpose.eu/wp-content/themes/rmwrk/documents/RSP_Competences.pdf)
- Sleurs, W. (2008). Competencies for ESD (Education for Sustainable Development) teachers. A framework to integrate ESD in the curriculum of teacher training institutes. Comenius project report. [https://unece.org/fileadmin/DAM/env/esd/inf.meeting.docs/EGonInd/8mtg/CSCT%20Handbook\\_Extract.pdf](https://unece.org/fileadmin/DAM/env/esd/inf.meeting.docs/EGonInd/8mtg/CSCT%20Handbook_Extract.pdf)

Teräs, H., Ametller Leal, J & Asikainen, E. (2024). Strengthening Teachers' Sustainability Competences through Digital Open Badges. Society for Information Technology & Teacher Education International Conference, Mar 25, 2024 in Las Vegas, Nevada, United States. Association for the Advancement of Computing in Education (AACE), Waynesville, NC USA.

TIEKE (2022). Digitaalitojen osaamismerkistö. Merkistön hallintamalli. <https://tieke.fi/wp-content/uploads/2022/02/Digitaaitomerkiston-hallintamalli.pdf>

UNECE (2012). Learning for the Future: Competences in Education for Sustainable Development. Geneva: United Nations Economic Commission for Europe. [unece.org/fileadmin/DAM/env/esd/ESD\\_Publications/Competences\\_Publication.pdf](https://unece.org/fileadmin/DAM/env/esd/ESD_Publications/Competences_Publication.pdf).

Finnish Government. (2022). Osaamisen tunnistamisen työryhmä: Väliraportti. Valtioneuvoston julkaisuja 2022:74. [https://julkaisut.valtioneuvosto.fi/bitstream/10024/164492/1/VN\\_2022\\_74.pdf](https://julkaisut.valtioneuvosto.fi/bitstream/10024/164492/1/VN_2022_74.pdf)

Finnish Government. (2025). Osaamisen tunnistamisen työryhmä: Loppuraportti. Valtioneuvoston julkaisuja 2025:4. [https://julkaisut.valtioneuvosto.fi/bitstream/10024/166018/1/VN\\_2024\\_4.pdf](https://julkaisut.valtioneuvosto.fi/bitstream/10024/166018/1/VN_2024_4.pdf)