HUMAN RESOURCE DEVELOPMENT CENTRE

GREEN STEAM

Co-funded by the European Union

Methodology

Toolkit & Flipped learning labs

Work package n°3
March'24-July'25

AHE
University of Humanities and Economics
Poland

WP3 Goals

- WP3 aims to develop a Toolkit with practical exercises, and a Women Mentor's Guide, collect practical challenges from the business, and implement the flipped learning courses in organizing a Hackathon.
- The developed Toolkit with practical exercises, Women Mentor's Guide (WMG), and the opportunity of female STEAM students to participate in the training, where in 6 months, they will exploit the developed training resources involving flipped learning labs, facilitated by the trained teachers, they will work in teams on real-life challenges, and present the results in demonstration events is a key part of the project's objective.

The main results of this WP3 are **3**:

1. Toolkit

2. Women Mentor's Guide

3. Hackathon

Qualitative and quantitative indicators

QUALITATIVE INDICATORS:

- **AHE** as a leader of this WP 3 will develop a detailed and comprehensive methodology.
- **Mindshift** will develop a Women Mentor's Guide.
- Each partner provides critical feedback for all the activities of the work package.
- All partners positively evaluate the work package.

- All partners evaluate the work package leader (or co-leaders) positively.

QUANTITATIVE INDICATORS:

- 1 document that will be used to implement, according to the specified objectives, expected outcomes and most effective way to deliver (the methodology)
- Collected at least 50 particular cases from the companies.
- 1 Women Mentor's Guide.
- 250 participants at the Hackathon.
- 1 template of certificate for the Hackathon.
- Women Mentor's Guide in 6 languages (EN, BG, PL, PT, IT, and GR).

I. TOOLKIT

The Toolkit consists of two parts:

1. GreenSteam Teaching Resources
2. GreenSteam Practical challenges

1. GreenSteam Teaching Resources

- at least 15 resources PER PARTNER
    - **by 31.07 - 2 resources (learning/teaching activities) PER PARTNER (eng) per section for the module they develop (10 resources per partner)**
    - **by 30.09 - during the peer review the other partners will provide input 1 resource (activity) per module, to keep the European perspective of the modules (5 resources per partner)**
- 16 resources per module or 80 resources in total.
- Collected and designed set of practical exercises on each of the 5 modules (in EN)
    - **creative tasks**, cases for review, research ideas**, inspiring videos**/ movies, pool of challenges, individual assignments and group tasks (brainstorming, mind maps, Open Space, World Cafe, Climate Collage, photo voice, etc) and facilitation tips that will be used by the teachers during the training process;

- **Instruction notes on the flipped learning labs**
- application of the **design thinking approach**,

  Following a design-thinking process, the students will:

  - Empathyse - research and analyze the specific situation, challenge and users' needs (by designing an empathy map and creating a Persona);
  - Define the essential problem;
  - Ideate - brainstorm solutions;
  - Create a prototype of the chosen solution using different models - charts and diagrams, paper models, 3d printed models, mockup/role-play, video simulation, game, project/initiative, physical test models for feasibility test, etc.;
- **assessment criteria.**

At least 12 experts (2 experts per partner) from partners' organizations (university professors, trainers, education and career guidance experts) will take part in collecting and designing a set of practical exercises on each of the 5 modules (in EN).

2. GreenSteam Practical challenges

- UCTM, AHE, Unitelma, SEIT, and Mindshift will **collect from associated organizations** and companies at least **10 practical cases per partner (2 CASES PER MODULE)** which will be **the tasks for the students participating in the Hackathon**.
- Each partner will collect practical cases from companies and organizations, that can be solved by STEAM students during the Hackathon.

Companies will participate in the assessment of the solutions, proposed by students, and may **award** them or offer them **internships**.

At least 50 participants (10 participants per country) from associated organizations and companies will be invited to propose practical cases and challenges, related to sustainability that can be solved by STEAM students during the Hackathon. The companies will participate in the training process by hosting visits for students to demonstrate the challenges they have in practice. They will also support students with feedback during the design phase, and at the demonstration events, when the teams of students will show up their solutions.

II. Women Mentor's Guide

- Mindshift will develop a Women Mentor's Guide in EN. This guide will showcase practical tools for teachers and trainers working with female entrepreneurs in STEAM to help them pursue their business ideas. The guide will, thus, include relevant materials such as teaching tips, real-life examples of successful female entrepreneurs in STEAM, coaching and mentoring approaches targeting women, etc., focusing on the skills of teachers and trainers when supporting this specific group.
- Mindshift will provide the template for stories of women. Each partner is kindly asked to provide to Mindshift a story of a woman who was a great personality in STEAM sector, with clues on how she did it, what problems, adversities, and complications she met, and how she dealt with them.
- All partners will provide critical feedback.

All partners will translate the Women Mentor's Guide into their languages.

The **Women Mentor's Guide** will be freely accessible through **the Open Learning Platform in 6 languages** (EN, BG, PL, PT, IT, and GR).

III. Hackathon

- **At least 250 HE students (minimum 60% of them female)** / 50 per country **(minimum 30 female)** will participate in the Hackathons in Bulgaria, Poland, Portugal, Italy, and Cyprus.
- The Hackathon will take place for **6 months (January - June 2025)**.
- During the hackathon, the students will:
  (1) exploit all developed training resources,
  (2) take part in flipped learning labs, facilitated by trained teachers,
  (3) work in teams on real-life challenges, and
  (4) will present the results in demonstration events, involving employers.
- Partners will organize at least **5 flipped learning labs (one per month).** Before each lab, the students should autonomously complete one online training module. During the lab, they will discuss with the facilitators practical challenges, concepts, and ideas, that emerged during the learning process. Thus, during the piloting, all students will complete all modules.

Learning Diary

Students will document the learning process by taking photos and videos in each session and share their progress in a **learning diary**. The learning diary activities could be published on student's profiles on **Linkedin**, to make it more professional and to help them develop a professional web of contacts.

The labs will be sustained as students' clubs or incubators, where the cohort of students who finished the course can act as mentors to the new ones and develop their leadership, mentorship, and facilitation skills.

Expected profile of participants

The project will particularly aim to attract **female learners** who are less represented across the sectors, which will generate more advanced opportunities in the next decades - including digital and green jobs, and entrepreneurship.

Additionally, the partners will promote the course to **disadvantaged learners**, such as **economically deprived**, **migrants and refugees**, etc. - who are more negatively affected by the turbulence in the labor market and face particular difficulties in engaging in regular courses.