Project GYW

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E-course "Green Skills for successful employment and work in the process of the transition to a more 'green' and environmentally sustainable economy" for young people at risk of marginalization
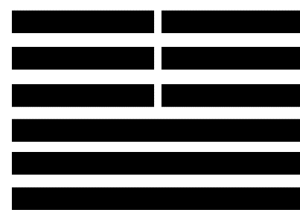
Module III

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CEIPES

KYIV BUSINESS SCHOOL

Fundacja Marki Polskiej im. prof. Witolda Kieżuna

Education Centre "Socialization"

MODULE III
Learning Objectives

This module introduces the third GreenComp competency area 'Envisioning sustainable futures', which includes the competencies 'Future Literacy', 'Adaptability' and 'Exploratory Thinking' :

- To understand what the third GreenComp competency area "Envisioning sustainable futures" entails.

- To gain knowledge about the three competences included in this module: Future Literacy, Adaptability and Exploratory Thinking.

- Learn about the importance of developing 'envisioning sustainable futures' competencies in order to achieve sustainability goals.

- Understand the relationship between the different core competencies included in Envisioning Sustainable Futures and sustainability.

- Identify the skills, knowledge and attitudes required to practise and promote Envisioning Sustainable Futures competencies.

Envisioning Sustainable Future
Introduction

The challenge of adaptation

Over the past two decades the global community has seen environmental concerns rising at unprecedented levels, with serious consequences across the planet's corners. Rising temperatures, food insecurity, biodiversity loss and deforestation are just among the factors that have come under scrutiny by a wide range of actors and international organisations, that are trying to intensify efforts to limit damages as much as possible.

However, though climate-related phenomena can be triggered by natural processes - such as the variations of the solar cycle - it has become evident that human activities represent the main driver of the ongoing climate change era, primarily due to burning fossil fuels like coal, oil and gas(1). Recurrent global crises have turn their attention on the weaknesses of the current economic system and the uncertain scenarios the future holds, especially when dealing with sudden shocks not easy to foresee in due time. As noted by the European Environment Agency, the financial crisis of 2008-2009, the continuing COVID-19 pandemic and the recent war in Ukraine have each challenged widely held assumptions, for example about how best to organise and regulate the economy(2).

In this context, given that most noxious environmental phenomena cannot be avoided but just mitigated in the best possible way, the concept of human adaptation to climate change has begun to take shape. The UNFCCC has defined adaptation as the adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects. It refers to changes in processes, practices and structures to moderate potential damages or to benefit from opportunities associated with climate change. In simple terms, countries and communities need to develop adaptation solutions and implement actions to respond to current and future climate change impacts(3).

Envisioning Sustainable Future
Introduction

 The European Union has taken the challenge of adaptation seriously, pledging to become a carbon- neutral economy by 2050 through the adoption of the European Green Deal. In practical terms, the European Green Deal is a set of policy initiatives coordinated across the EU and its Member States to speed up the transition towards net zero greenhouse gas emissions by 2050, including by reaching emissions reductions of at least 55% by 2030 compared to 1990 levels4. Among the several tools that will be employed to achieve EGD's goals, education has been selected as a valuable way to help spread awareness and competence on sustainability, providing a common ground to learners and guidance to educators(5). One of the competences to develop in the GreenComp framework is the capacity to cope with uncertainty and imagine future scenarios, as detailed in the next section.

Envisioning Sustainable Futures

It is widely acknowledged that excessive exploitation of natural resources and increasing pollution of the environment pose a threat to the existence and well-being of current generations. But how much they also deplete the resources that future generations will have to survive on seems to receive less attention. Lack of representation of these yet-to-come generations in the policy-making process is seen as a problem for sustainable development – this lack of representation is not only contributing to a short-term (one generation) perspective on strategies for economic and social growth, but also points to a flaw in democratic processes where decisions are made without the consent of those they are most likely to affect(6).

The third area competence of the GreenComp Framework, **Envisioning Sustainable Futures**, has the objective to make learners able to identify future scenarios and take the best actions to achieve a sustainable future. In a nutshell, learners from all age will be encouraged to start thinking to complex solutions for uncertain scenarios, but in a transdisciplinary way and through the power of imagination. The first skill is thus focused on the *Future Literacy* to be developed so as to identify the steps needed to achieve a preferred sustainable future.

Envisioning Sustainable Future
Introduction

In this context, the word **Adaptability** – the second skill of the section - becomes particularly important as it entails the capacity to cope with uncertainty and future with too many variables to be foreseen in easy ways. This skill specifically focuses on managing transitions and challenges in complex sustainability situations and make the best possible decisions related to the future. Imagining solutions to complex systems' – as in the GreenComp methodology - will therefore employ the use of information from several disciplines and traditions with the potential to help people make informed decisions. Therefore, learners are advised to think of a wide range of possible future outcomes and envision alternative future scenarios for sustainability(7).

The third specific skill refers to the **Exploratory Thinking,** and therefore requires cognitive processes and people to use their intuition. The issues covered and the pedagogical approaches adopted in sustainability education should encourage learners to develop abilities in creative thinking, according to assertions while emphasising the close links between the two fields.

Learning Objectives:
1) Future Literacy: A Use the power of imagination and creativity to assess the possible steps needed to achieve their preferred future.
2) Adaptability: Acquire knowledge resulting in changing opinions and behaviour and a mindset involve of teaching people about the significance of a changing climate.
3) Exploratory thinking: Adopt a mindset that helps achieve a circula2r economy in our society and stimulates new ways of social interaction and new cultural practices

Envisioning Sustainable Future
Introduction

1 https://www.un.org/en/climatechange/what-is-climate-change

2 https://www.eea.europa.eu/publications/scenarios-for-a-sustainable-europe-2050/imagining-sustainable-futures-for-europe

3 https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/introduction

4 https://europeanclimate.org/the-european-green-deal/

5 https://joint-research-centre.ec.europa.eu/greencomp-european-sustainability-competence-framework_en

6 https://pjp-eu.coe.int/documents/42128013/47261944/04_PoY-3-EN.pdf/aac7d4e0-a05f-41a3-9d0f-c18f8ac9345a

7 https://joint-research-centre.ec.europa.eu/greencomp-european-sustainability-competence-framework_en

Module III:
Third GreenComp Competence Area

Envisioning Sustainable Futures

Envisioning Sustainable Futures

Competence I:

Future Literacy

Future literacy
What is it?

Future literacy is a concept that refers to the ability to understand, navigate, and shape the future. It is a set of skills and capacities that enable individuals, organizations, and societies to anticipate and respond effectively to the challenges and opportunities of an uncertain and rapidly changing world. Futures literacy aims to empower learners to create their visions for a sustainable future by providing them with the knowledge, skills and attitudes to understand the futures as a variety of alternatives.

Through futures literacy, learners can anticipate, prepare and invent as changes occur with the aim to:

· Use the imagination when thinking about the future

· Tap into intuition and creativity

· Assess the possible steps needed to achieve their preferred future. By using real-life experiences, learners can be taught in futures methodologies that adopt qualitative and/or quantitative research methods.

Future Literacy
Why is important?

Building a sustainable future is essential for the well-being of people, the planet, and future generations. It requires us to rethink our current practices, make conscious choices, and take collective action to ensure a prosperous future for all.

Environmental Stewardship

By adopting sustainable practices, we can mitigate climate change, reduce pollution, conserve water and energy, and safeguard the Earth's ecosystems for future generations.

Social Equity

Sustainable development seeks to reduce inequalities, promote inclusive societies, and create opportunities for everyone to thrive.

Economic Prosperity

By embracing sustainable practices, we can foster innovation, create new industries and jobs, promote efficient resource management, and drive economic growth in a way that is both environmentally friendly and socially inclusive.

Future Literacy
Knowledge, Skills and Attitudes required (KSA)

Knowledge

Environmental conscience: Understanding the principles of sustainability, ecological systems, climate change, renewable energy, waste management, and the interconnectedness of human activities and the environment.

Resource Management: Knowledge of efficient use and conservation of natural resources, including water, energy, land, and materials.

Skills

Critical Thinking: The ability to analyze complex problems, evaluate information, and make informed decisions considering environmental, social, and economic factors.

Systems Thinking: Understanding the interrelationships between different components of complex systems and recognizing the potential impacts of actions on various stakeholders.

Attitudes

Environmental Responsibility: Having a sense of personal and collective responsibility for protecting the environment and reducing one's ecological footprint.

Long-Term Thinking: Recognizing the importance of long-term planning and decision-making that considers the well-being of future generations.

Ethical Values: Embracing ethical principles such as fairness, equity, social justice, and respect for all living beings when making choices and promoting sustainability.

Future Literacy

KSA to create a sustainable garden

Knowledge

- **Knowledge** about environmental issues and sustainable practices. Also, about renewable energy sources.
- **Understanding** of the concept of carbon footprint.
- **Awareness** of the importance of waste reduction and recycling.

Skills

- **Application** of organic gardening techniques.
- **Implementation** of companion planting and water conservation methods.
- **Optimization** of soil and space.
- **Employment of methods** to minimize the use of harmful chemicals.

Attitudes

- **Committed** to live in harmony with nature.
- **Motivated** to act even if requires extra effort and dedication.

To grow a sustainable garden, people need to apply their knowledge and skills. They need to know the theory behind organic gardening and water conservation and put this knowledge in use to choose the best watering, soil nourishment and garden protection methods, they need to know how to compost. When doing all this they are driven by their attitudes towards the environment: responsibility, accountability, among others.

Real Life Example

Prompting 'futures literacy' as a life skill for students and educators (SDG 4) is the mission of the global non-profit organisation Teach the Future. Thanks to their resources for lifelong learning, learners can imagine more sustainable futures, where, for example, communities have access to clean water, clean energy and healthy food (multipleSDGs including 6, 7, 2).

https://www.teachthefuture.org/

Envisioning Sustainable Futures

Competence II:

Adaptability

Adaptability
What is it?

Adaptability is about being flexible and able to adapt to new situations and adjust to accommodate changes in our complex world. It is essential that individuals cope with uncertainty about the future and the ambiguity of wicked sustainability problems and how they may evolve.

It encompasses the goal of creating a balanced and thriving society, economy, and environment, while also addressing the challenges of climate change, resource depletion, social equity, and more. Given the complex and rapidly changing nature of sustainability issues, adaptability plays a significant role in achieving sustainable outcomes.

Adaptability
How does relate to sustainability?

Responding to Change

Sustainability efforts often require responding to changing environmental, social, and economic   conditions. Adaptable individuals and organizations can adjust their strategies and practices to address emerging sustainability challenges, such as climate change impacts, policy changes, market shifts, or technological advancements.

Embracing Innovation

Sustainability requires innovative approaches to solve complex problems. Adaptable individuals are more open to new ideas and technologies, allowing them to embrace innovative solutions and contribute to sustainable development. They can adapt to and adopt emerging sustainable practices, technologies, and business models.

Systems Thinking

Adaptable individuals understand the interconnectedness and interdependencies of various sustainability issues. They can analyze complex systems and recognize the potential impacts and unintended consequences of their actions. This holistic perspective helps them adapt their strategies to ensure sustainability across multiple dimensions.

Adaptability

Why is important?

Adaptability is crucial in sustainability because it enables individuals and organizations to navigate complexity, respond to change, seize opportunities, enhance resilience, promote continuous learning, and build effective stakeholder relationships. By cultivating adaptability, we can effectively address sustainability challenges and work towards creating a more sustainable and resilient future for all.

For cognitive adaptability, this might involve better teaching people about the significance of a changing climate.

For behavioral adaptability, this might involve promoting positive and constructive actions among young people that support and sustain the environment.

Example:

KSA to adapt to climate change in coastal areas.

Knowledge

Knowledge about the impact of climate change on their region.
Understanding of the specific risks their community faces, such as sea-level rise, increased storm intensity, and coastal erosion.
Awareness of the importance of adaptation in safeguarding their community's well-being.

Skills

Developing skills in adaptation planning.
Acquiring tools for assessment of their community's vulnerability to climate change impacts.
**Collaboration** with local experts, researchers, and community members
Data analysis and translation of information into actions.

Attitude

Long-term perspective
Fostering collaboration by engaging diverse stakeholders, including residents, businesses, government agencies, and NGOs.

Leaders needs to be aware of climate change and the impact of it on coastal areas. They need to have skills on planning, risk assessment, creating strategies, collaboration with stakeholders, flexibility, negotiation, among many others to support their communities to face climate change effect successfully. They must be driven by an attitude of openness to innovation, resilience and long-term thinking.
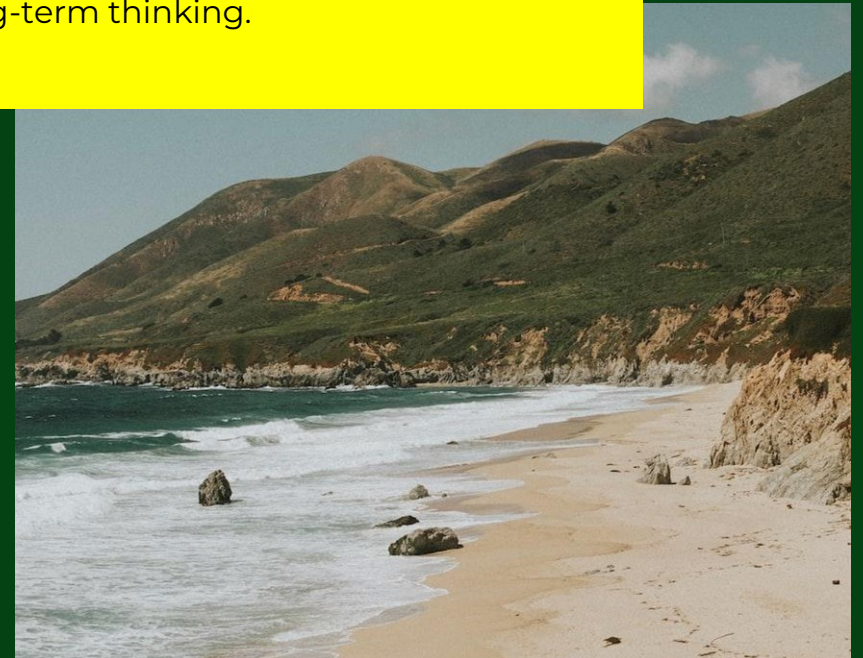
Real Life Example

Young people play a central role in driving the adaptation agenda. On 22 January 2021, young people from over 115 countries launched 'Adapt for our Future' a global youth call to action on adaptation. This initiative aims to prepare younger generations for the transition towards green and climate resilient development.

https://gca.org/reports/adapt-for-our-future-youth-and-climate-change-adaptation/

Envisioning Sustainable Futures

Competence III:

Exploratory Thinking

Exploratory Thinking
What it is?

Exploratory thinking refers to an approach or mindset that encourages the exploration of innovative ideas, solutions, and possibilities to address sustainability challenges. It involves questioning the status quo, challenging conventional thinking, and seeking new ways to promote environmental, social, and economic sustainability.

Long-Term Perspective

Going beyond short-term solutions and considering the long-term implications of actions. Exploratory thinking involves envisioning a sustainable future and working towards achieving it through forward-thinking strategies in a *transdisciplinary way.*

Collaboration and Partnerships

Recognizing that societal challenges are complex and require collective action. Exploratory thinking involves seeking collaborations and partnerships with diverse stakeholders, including businesses, governments, academia, and communities, to foster innovation and implement long-lasting solutions.

Exploratory Thinking
Why is important?

In the context of sustainability, exploratory thinking plays a vital role in addressing the intricate challenges we face.

Drives innovation

It allows us to delve deeper into the underlying causes of environmental, social, and economic issues and explore new avenues for solutions

Fosters adaptation

By adopting an exploratory mindset, we can stay informed about emerging trends and be proactive in adapting our strategies and actions to address new challenges and opportunities.

Encourage collaboration

Recognizing that sustainability challenges require collective efforts, exploratory thinking encourages collaboration among diverse stakeholders

Empowers individuals and organizations

To actively shape a more sustainable world.

Exploratory Thinking
Knowledge, Skills and Attitudes required (KSA)

Knowledge

Problem solving: Proficiency in problem-solving skills, including identifying root causes, evaluating options, and developing actionable plans, is fundamental. Exploratory thinking enables individuals to approach complex sustainability challenges systematically and develop effective solutions

Skills

Learning Agiliy: A commitment to continuous learning and a willingness to embrace new knowledge and perspectives are essential. Exploratory thinking requires individuals to be adaptable, reflect on experiences, and learn from both successes and failures

Attitudes

Curiosity and Inquiry: A genuine curiosity and thirst for knowledge drive exploratory thinking. An inquisitive mindset prompts individuals to ask questions, seek new information, and continuously learn about emerging trends, technologies, and practices in sustainability.

Example:

KSA for developing a community-based carbon off-set program.

Knowledge

Knowledge about last scientific and policy development around climate change.
Understanding of climate change causes and its relationship with human activity.
Awareness of the potential impact of climate change on ecosystems, communities and economies.

Skills

Data analysis and modelling to ideate and test innovative solutions.
Research to identify the most relevant sources of emissions.
**Collaboration** with multidisciplinary experts.

Attitude

Proactivity to recognize the need of urgent action.
Questioning the status quo to uncover new opportunities and creative solutions.

Emma is a researcher and is passionate about tackling climate change through exploratory thinking. To achieve this, Emma keeps abreast of the latest developments in climate change. She also uses her skills in research, data analysis and modelling to develop innovative solutions, working with experts from a range of fields. She has been proactive in tackling the challenges of climate change through an open-minded attitude, which has led her to develop a community-based carbon offsetting programme.

Real Life Example
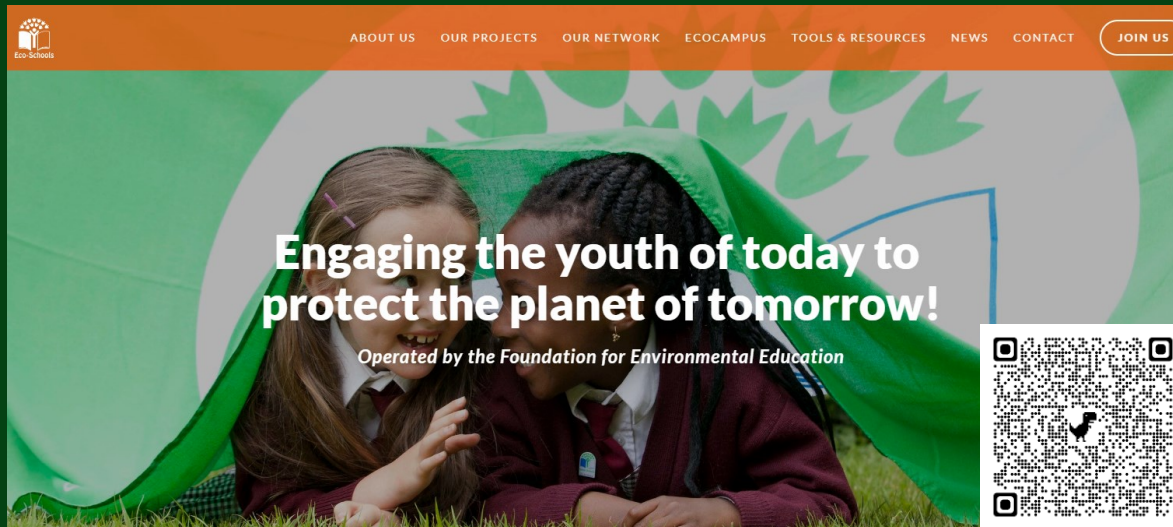
`Reduce, reuse, recycle' is a well-known concept for the circular economy, and an exploratory thinking approach can help turn waste into a precious resource. The Eco-Schools programme has developed several trash hack ideas that can help explore the issue of waste from different perspectives

https://www.ecoschools.global/trash-hack-ideas

Envisioning Sustainable Future
Self-assessment of knowledge after the course

1. How would you define "Envisioning Sustainable Futures" within the
context of Sustainability?
a) The ability to imagine and articulate a vision of a sustainable future.
b) The skills to develop strategic plans and roadmaps for achieving sustainable goals.
c) The capacity to engage stakeholders and inspire collective action towards sustainability.
d) All the above.

2. Which one of these is not one of the *core* "Envisioning Sustainable Futures" competences.
a) Future Literacy
b) Data analysis
c) Adaptability
d) Exploratory Thinking

3. How important is "Envisioning Sustainable Futures" for driving sustainable development?
a) Not important at all.
b) Somewhat important.
c) Moderately important.

Envisioning Sustainable Future
Self-assessment of knowledge after the course

4. What are the key benefits of effectively envisioning sustainable futures?
a) Encourage long-term thinking and planning.
b) Motivates and inspires individuals and organisations.
c) Identifies opportunities for innovation and transformative change.
d) All of the above.

5. How can individuals or organisations develop their "Envisioning Sustainable Futures" competence?
a) Engaging in future scenario planning exercises.
b) Conducting trend analysis and focusing only on economic data.
c) Collaborating with rich stakeholders to shape a collective vision.
d) Making forecasts based on political expectations.

6. Can you provide an example of a real-world initiative that exemplifies "Envisioning Sustainable Futures"? Briefly describe it.

7. How would you explain the relationship between Future Literacy and Economic Growth?

Envisioning Sustainable Future
Self-assessment of knowledge after the course

8. In your opinion, what role can education and training play in developing the competence of "Envisioning Sustainable Futures"?

9. What is the importance of "Adaptability" for the development of a more sustainable future?

10. How would you explain the relationship between collaboration and exploratory thinking?

Workshop
The Balance of Ecosystem

Workshop title: The Balance of Ecosystem
Activity duration: Approx. 120 minutes
Objectives: Raising awareness of the effects that everyday behaviour can have on the environment and - more generally - on complex systems.
Methods used: Non-formal education, Sensory Test, Natural Toothpaste making, Debriefing
Workshop description and timing:
1. Icebreaking moment – (10 min.)
Introduction of the participants and the trainer, moment of icebreaking where people give a small background about themselves. It will be asked if anyone is involved in environmental jobs.
Duration: 10 minutes
2. Video and discussion - (20 min.)
Projection of a small video on plastic pollution and the importance of environmental decision-making
https://www.youtube.com/watch?v=HQTUWK7CM-Y
Discussion on the video produced by asking some personal questions to the participants, for example:
- Has visual stimulation, through images that certainly also have a strong emotional impact, contributed to reflection on your habits?
- What, if any, was the image that most stimulated your reflections and why?
- Do you believe that your actions can contribute to worsening or improving your current situation?

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Workshop
The Balance of Ecosystem

5. Do you often use reusable packages and bags?
6. Do you limit the meat consumption on behalf of eating more vegetables?
7.Do you think you really buy necessary staff and goods?
8. Do you pay attention to how much water you use during a shower?
9. Do you use public transport as a main form of mobility?
10. Do you prefer a glass bottle to a plastic bottle?

The Yes have a positive impact on the ecosystem's health, the No are noxious decisions
After the balance reveals the results, the class will see if the ecosystem is in equilibrium and there will be a discussion on changing noxious habits for the environment. For example:
- Do you think this experience may have stimulated you to reflect on the balance of ecosystems and the impact of our actions, even the simplest ones?
- In general, what did you feel when physically weighing the impact of your actions?

Final debriefing: (10 min.)