Green Collider

MODULE 3: Green competencies – defining them and how to develop them

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1. Introduction

Recent years have demonstrated the reality and urgency of climate change. The most recent seven years (2015–2021), according to the World Meteorological Organization, were the hottest ever recorded. Likewise, in the middle of July 2021, Germany saw the worst floods ever seen in Western Europe, which resulted in $20 billion in losses to the country's economy. Additionally, Turkey experienced droughts. Many nations, including Spain, Greece, and France, experienced severe wildfires. These are only a few examples proving that actions to mitigate these climatic disasters should be taken immediately. However, we must develop durable skills if we want to be certain that the actions we do are the right ones.

This module addresses the sustainable competencies, in other words, the GreenComp framework which was developed by the Joint Research Centre (JRC) [(the European Commission's research and knowledge service)]. Thus, the module will list each competency along with brief explanations of what it means and how it should be understood. The module will then go through some tips for putting certain competences into practise while encouraging lifelong learning and focusing on SMEs (small and medium-sized enterprises), VET (vocational and education training) instructors, and students. Last but not least, the module will discuss a few digital tools, like Refill, Spinlister, Too good to go, and Almond among others, that may encourage and facilitate the process of integrating green competences into our daily lives.

2. Key words

Sustainability, competences, SMEs, VET teachers, digital tools

3. Learning Objectives

- the learners will gain and develop their knowledge of sustainable competences;
- the learners will be encouraged to introduce sustainable changes into their daily routines;
- the learners will be informed about the existence of digital tools which might facilitate the process of incorporating sustainable competences into their everyday life;
- the learners will be made aware of the fact that individually taken actions matter.

4. What is GreenComp?

In response to the European Green Deal, GreenComp acts as a manual that specifies sustainable competencies in light of a consensus achieved by experts and stakeholders. The framework was developed in response to the growing demand for individuals to acquire knowledge, skills, and better attitudes in order to begin living sustainably and ecologically. The authors understood that the ability to integrate sustainable practises into everyday routines was crucial to both the health of the planet and its inhabitants. The term "GreenComp" refers to a set of 12 competencies that are divided into four different areas. For the European Commission the existence of such a framework is of high importance as the goal that has been set is to turn Europe into "a climate-neutral continent" by the year 2050.

The authors believe that "long-lasting change requires lifelong learning and that is why the goal is to educate people of all ages about the fact that people are dependent on nature and about the importance of preserving biodiversity and slowly but surely employing sustainable practices. Moreover, the authors consider the framework to be a "living document" and expect changes to be introduced in the near future whenever the competences are put in practice.

The developers of the framework define sustainability as ensuring that human actions do not negatively impact other living forms or the planet itself. What is more, it also stands for the concept of making sure that the boundaries of a planet are not exceeded in terms of, for instance, the use of fossil fuel. What is more, it also stands for the concept of making sure that the boundaries of a planet are not exceeded in terms of, for instance, the use of fossil fuel.

5. Competences

GreenComp divided sustainability competences into four areas:

- Embodying sustainability values
- Embracing complexity in sustainability
- Envisioning sustainable futures
- Acting for sustainability

Let's look into what competences are included into these areas to be able to understand them properly.

5.1 Embodying sustainability

The competences that are included into the first area (embodying sustainability) are:

a) valuing sustainability – the competence puts emphasis on reflecting on personal values of individuals to compare them and see how different they are and, subsequently, to evaluate how they conform with the idea of sustainability. This competence makes people aware that values are chosen by people who have the power to decide which ones they will prioritise in their lives.

b) supporting fairness – the emphasis on fairness for all generations, those who are alive today and those who will occupy the planet in the future.

c) promoting nature – to preserve the biosphere, the competence indicates respecting and acknowledging the needs as well as rights of all the living things.

5.2 Embracing complexity in sustainability

The competences that are included into the second area (embracing complexity in sustainability) are:

a) systems thinking - the competency refers to taking into account the context in order to understand how all aspects are interconnected.

b) critical thinking – the competence puts emphasis on the ability to evaluate the information and arguments given and to reflect on how aspects such as the environment and culture that one is raised in as well as one's background influence the particular person's way of thinking.

c) problem framing – the competence is about finding solutions or applicable approaches to either existing or potential challenges.

5.3 Envisioning sustainable futures

The third area (envisioning sustainable futures) consists in the following competences:

a) Futures literacy – the competence deals with the ability to envision various scenarios of sustainable futures and striving to develop them by taking necessary actions to reach the best results.

b) Adaptability – the competence denotes the ability to adapt to different situations and make appropriate decisions when faced with situations that are ambiguous or risky.

c) Exploratory thinking – the competence consists in creativity and experimentation in search for innovative ideas and cultural practices to reach sustainability.

5.4 Acting for sustainability

The forth area (acting for sustainability) is comprised of the following competences:

a) political agency – the competence is about calling for policies regulating sustainable responsibilities as well as for holding people accountable for behaviour that is not sustainable.

b) collective action – the competence implies the ability to take action collaboratively in order to make change.

c) individual initiative – the competence is about using one's own potential to the fullest in the name of sustainability and improving the state of the planet as well as the community.

6. How to apply them

6.1   SME

It is of high importance that SMEs (small and medium-sized enterprises) employ such competences in the functioning of their companies, for when we accumulate all of them the scale of their impact on the environment and the footprint left by them is quite notable, taking into consideration that in Europe 60-70% of industrial pollution is caused by SMEs. Similarly, VET (vocational and education training) educators should gain the knowledge of such competences to be able to pass them forward to their VET students. In this chapter some tips on how to incorporate selected competences into daily routines will be provided.

The knowledge of sustainable competences may be useful for SMEs or the people who wish to open their own business one day as sustainable practices may actually attract more customers, taking into consideration the fact that more and more people are affected by the environmental changes, for instance, by the summer heat which these last years was for many unbearable. SMEs might adapt the competence of "exploratory thinking," since they may create a business out of new, sustainable practices, for example, a company might launch a new platform or a website where people can swap clothes, share cars, give away food that they would not be able to consume due to an upcoming trip or just simply because of an abundance of products in the fridge. This competence is about creativity and innovation. Since SMEs need to envision possible scenarios for their businesses to avoid possible mistakes and risks, for failing to do so might result in bankruptcy, why not embrace the competence "envisioning sustainable futures" and visualise a future that is eco-friendly and responsible? The competence is connected with the one called "futures literacy."

6.2   Case Study

Petit Cafè, a small restaurant in L'Amposta (Catalonia) Spain with a "km0" philosophy. Isabel Alejos Reche, owner of the place, took to heart the commitment to serve quality, fresh and most importantly, local products in her restaurant. At Petit Cafè, essential ingredients such as oil, fish, lamb, rice and wines are sourced locally as she felt encouraged to reduce the chain of distributors and thus also reduce CO_2 emissions by reducing food transport. Moreover, Petit Café is part of the Slow Food community, which is a non-profit eco-gastronomic association founded in 1989, currently represented in 122 different countries. This said, Isabel (Petit Cafè) embodies the competences of individual initiative and system thinking as she recognised her

responsibility for the state of the planet as well as the community she lives in. This inspired to create alliances with local producers that both benefit her, other people in her proximity (local producers) and the planet.

6.3 VET

The VET teachers can play a major role in passing forward the knowledge related to the competences. In the classroom they can highlight the significance of learning about environmental sustainability since learning might cause a shift in one's opinions or behaviour. What is more, they can create learning opportunities aimed at improving such competences as well as support students in developing their sustainability skills and in embracing new green practices for their everyday routines. The teachers might also encourage collective actions, for instance gathering all students to pick up rubbish in a forest.

Although in this micro-module we focus on SMEs as well as VET teachers and students, it is of great importance for all people to live according to the competence of "individual initiative" which stands for taking the lead and being an agent of change. Furthermore, the competence also involves proving that a sustainable lifestyle does not mean a lower standard of living or greater expenses.

6.4 Case Study

Even though this is a top-down initiative, here is a good example of VET schools and students embracing and practicing the green competencies (specifically the ones for the Envisioning sustainable futures area):

Centro de Formación Folgado in Valencia (Spain) is going to participate in the EMPRENDE_IMPACT+ Innovation Project, supported by the MEFP (Ministry of Education and Vocational Training), whose objective is the design and launch of a new Sustainable Entrepreneurship Programme.

The entrepreneurship programme is mainly aimed at students of intermediate and higher vocational training cycles who want to undertake in the green, blue and social economy sector, in line of work 4. "Promotion of experiences for the creation of companies (business incubators), which stimulate entrepreneurial values in students, or that facilitate the transition to the labour market from the educational environment, providing the necessary framework, rules, support and accompaniment".

7. Digital tools in agreement with sustainable competences

In this chapter digital tools that may facilitate the process of incorporating green competences into daily and mundane routines will be presented.

7.1   Almond

Almond is an app whose goal is to help people lead a carbon balanced life. To accomplish the mission they need to follow four steps. First, the platform will help you calculate your carbon footprint for which you will be rewarded by means of protecting five trees located in the Amazon forest as well as through planting a tree. Second, the app will help you discover ethical brands. Next, whenever you make purchases from the brands mentioned above, you will earn the so-called "Offset Coins" (1 Offset Coin means plating one tree and protecting five of them). The last step is to commence the process of collecting as many Offset Coins as possible which enable you to plant as well as protect trees so that you reach a neutral CO_2 balance. This app is in agreement with the area of embodying sustainability as it has future generations and the air in which they will breathe in mind.

7.2   Spinlister

Spinlister is an app that facilitates and encourages the use of bicycles. Thanks to the app it is easier to resign from car rental when you are away and choose eco-friendly alternatives such as travelling by bike. Through the platform you can find a bike owner from whom you can either rent or borrow a bike.

7.3   Too Good To Go

Too Good to Go is an app which helps the planet by preventing food waste. The objective behind the creation of the app was to create a world in which what is produced is consumed and to minimise the amount of food being thrown away every single day. To use the app you need to first choose a store and set an hour. Subsequently, all you need to do is to collect the food at the time and place arranged.

7.4   Refill

Refill is an app whose aim is to limit and minimise to the greatest possible extent the use of plastic. The app helps you encounter places that function in the name of the so-called "zero waste"rule, i.e. stations where you can refill your bottle of water, coffee shops where you can get a discount for bringing your own cup, and places that will put the food you order into your own lunchbox.

7.5   Swancy

Swancy is an app whose aim is to limit the number of clothes people tend to buy nowadays and consequently limit the carbon footprint that the fashion industry produces. The founder (Kristin Grostad) says that it is not necessary to buy new things since things that people look for are already out there, at someone's house and ready to be used by another person. The functioning of the app is similar to that of a dating app. You swap through clothes to find a match. The app is in agreement with the sustainable competences as it consists of a circular economy and reduces consumption as well as purchasing behaviour.

7.6   BlaBlaCar

BlaBlaCar is an app that makes it possible to minimise the amount of exhaust fumes released into the atmosphere as thanks to the platform you can find a person (either a driver or a passenger) who wants to get to the same place as you. As a consequence, not only both of you save money on fuel but also help the environment minimising the CO_2 emissions. For security reasons all users are required to upload a photo of their IDs.

7.7   Good Guide

Good Guide is an app which rates for you, using a scale from 1 to 10, the social, health as well as environmental impact of various products available on the market. The listing is made out of 210,000 goods and consists of products of different types. Moreover, the app is easy to use

as you can either search for a certain product by typing its name or you can scan its barcode to see the results.

7.8   Giki

There are three types of Giki apps:

- Giki Bages that is used to scan products to see whether or not they are sustainable,
- Giki Zero that is used to calculate how your actions, practises and your lifestyle in general impact the planet,
- Giki Zero Pro that is designed for small businesses and organisations so that their employees could track their carbon footprint and feel empowered to introduce changes.

8. Summary

The module starts with a short introduction on the importance of changing our lives and of embracing sustainable practices, giving a few examples of climatic abnormalities (wildfires, draughts, extreme temperatures...) in Europe as a prove that we cannot abuse the environment and continue living as if tomorrow did not exist; on the contrary, we need to think about future generations and decent living conditions on Earth.

Then, the module presents sustainable competences which were first put forward by the Joint Research Centre (JRC) through GreenComp framework. The module enumerates the competences (which are divided into 4 categories: embodying sustainability values; embracing complexity in sustainability; envisioning sustainable futures; acting for sustainability) together with short descriptions about what each competence denotes and how it should be understood to avoid ambiguity and misunderstanding.

Subsequently, the module provides some pieces of information on how to apply selected competences, encouraging life-long learning and focusing on SMEs, VET teachers and students.

Last but not least, the module describes selected digital tools which deal with various aspects of sustainability which might encourage and facilitate the process of incorporating green competences into our everyday lives and mundane routines. The digital tools include among others: Refill, Spinlister, Too Good to Go and Almond.

9. Questions for reflection

1) Which competence do you find the most difficult to embrace and why?

2) Which apps are you willing to install on your mobile phone and why?

3) Are there any competences that you live according to?

4) Which competences would you like to work on?

10. Useful References and Resources

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