

Green Generations Teachers' Training Package



Module 1:Introduction to Intergenerational Climate Change Education















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1. Focus area and learning outcomes of the module

The module "*Introduction to Intergenerational Climate Change Education*" provides a thorough overview of the value and applicability of intergenerational learning in tackling the challenges associated with climate change. This unit examines the concept of intergenerational learning with a special emphasis on the notion of shared responsibility amongst generations that enables cooperation and knowledge sharing (or exchanging). The module also discusses several strategies and techniques for promoting intergenerational learning, such as storytelling and digital tools integration. Educators will also have the opportunity to delve into a rich depository with practical applications in order to integrate intergenerational climate change concept into their lesson planning, as well as to create sustainable intergenerational alliances for efficient climate action.

Learning outcomes

Upon completion of this unit, it is expected that the learner will be able to:

- 1) Define the concept of intergenerational learning (IGL) and its relevance in the context of climate change education.
- 2) Explore strategies for engaging different generations in climate action through intergenerational learning.
- 3) Employ intergenerational climate change education in the school context.
- 4) Explore techniques for bringing generations together for creating impact towards climate change.
- 5) Design strategies for building and sustaining intergenerational partnerships for effective climate action.
- 6) Get access to project management tools for designing and running your IGL project.

2. Key elements of the module

This part presents the main activities that have been planned and are analysed in more detail in the following section of this module. For reasons of simplicity, the activities are first summarised in the following list:

- 1. Introduction to Intergenerational Learning and Climate Change
- 2. Engaging Different Generations in Climate Action
- 3. The role of school in transferring intergenerational learning to Climate Change Education (CCE)
- 4. Creating Sustainable Intergenerational Partnerships for Climate Action
- 5. Project Management Aspect of Intergenerational (IGL) Projects

Total duration: 10 hours (including theory and all activities).











3. Theoretical presentation of the learning concepts

Intergenerational learning: According to UNESCO Institute for Lifelong Learning intergenerational learning promotes learning between and across generations, and puts the concept of lifelong learning into practice.

Climate Change Education (CCE): The comprehension of climate change among students and teachers is a critical first step in climate change education. Research findings indicate that many students lack a deep understanding of climate change concepts, such as the greenhouse effect (Stevenson et al., 2017). Climate change education is inherently interdisciplinary, drawing from various fields like chemistry, physics, biology, and earth sciences, making it challenging for both students and preservice teachers to grasp its complexity. Additionally, diverse cultural influences, geographical locations, wealth, gender, and worldviews further complicate individuals' understanding of anthropogenic climate change. As climate change is difficult to conceptualize and often lacks direct personal impact, developing effective educational strategies becomes essential.

4. Module presentation

4.1. Introduction to Intergenerational Learning and Climate Change

Causes and Effects of Climate Change

Climate change refers to long-term changes in the average weather patterns that have been observed over an extended period, typically decades to millions of years (UN, n.d). These changes encompass alterations in temperature, precipitation, and wind patterns on Earth. Scientists agree that the Earth's climate has been changing throughout its history, but the current understanding of climate change primarily refers to the significant and rapid changes occurring in the recent decades, largely attributed to human activities. The most



prevalent causes of contemporary climate change are associated with the increase in greenhouse gases (GHGs) in the atmosphere, primarily carbon dioxide (CO2) from burning fossil fuels, deforestation, and industrial processes (UN, n.d). These GHGs trap heat in the Earth's atmosphere, leading to a warming effect known as the greenhouse effect. Additionally, other factors such as methane emissions from livestock and landfills, nitrous oxide from agricultural activities, and the loss of carbon-absorbing forests intensify the greenhouse effect, exacerbating global warming.













The effects of climate change are wide-ranging and impact various aspects of the natural environment and human society. One of the most noticeable consequences is the rise in global temperatures, leading to melting polar ice caps and glaciers, resulting in sea-level rise. This phenomenon poses a significant threat to coastal regions and low-lying islands, increasing the risk of flooding and coastal erosion. Changes in temperature and precipitation patterns also contribute to extreme weather events, including heatwaves, droughts, hurricanes, and heavy rainfall, which have become more frequent and intense. These extreme events have devastating effects on ecosystems, agriculture, water resources, and human settlements, leading to food and water shortages, displacement of populations, and economic losses. Furthermore, climate change impacts biodiversity by altering habitats and migration patterns, threatening many plant and animal species with extinction. It also affects ocean currents and acidity, jeopardizing marine life and disrupting fisheries, which are essential for the livelihoods of millions of people worldwide.

Indicatively, here are some phenomena caused by climate change:

- 1. *Melting Polar Ice and Glaciers*: Climate change has led to a significant reduction in polar ice caps and glaciers worldwide. This melting contributes to rising sea levels and poses a threat to coastal communities (Rignot et al., 2019).
- 2. Ocean Acidification: Increased levels of carbon dioxide (CO2) in the atmosphere lead to higher CO2 absorption by oceans, causing ocean acidification. This phenomenon has adverse effects on marine life, particularly organisms with calcium carbonate shells or skeletons, such as corals and shellfish (Doney et al., 2009).
- 3. *Shifts in Biodiversity and Ecosystems*: Climate change influences the distribution and behavior of plant and animal species, leading to shifts in biodiversity and ecosystems.
- 4. *Increased Frequency of Extreme Weather Events*: Climate change intensifies the occurrence of extreme weather events, including heatwaves, droughts, heavy rainfall, and hurricanes (Knutson et al., 2010).

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Activity no 1: Climate Change Timeline.

What Intergenerational Learning (IGL) is?

According to UNESCO Institute for Lifelong Learning – intergenerational learning promotes learning between and across generations, and puts the concept of lifelong learning into practice. Although intergenerational programs in governmental policies are generally designed as interactions between children and seniors (elderly), intergenerational learning, also known as multigenerational learning, means relating to, involving, or affecting several generations. It is a multi-level and multi-directional relationship as opposed to the peer to peer (same age group) relationship that students are used to in the regular educational programs.















In general, intergenerational learning stands on non-formal and informal educational methods. Mostly done in the form of transferring knowledge and skills from older people to younger ones, the practice of intergenerational learning from young people to the older generations is nowadays mainly focused on the field of digital skills and ICT literacy. The most common practice of intergenerational learning from older people to younger is the transfer of transversal skills, traditions and sustainable practices of rural areas – gardening, farming and agroforestry.

Intergenerational learning enables people of all ages to learn together and from each other. The generations work together to gain skills, values, and knowledge. Beyond the transfer of knowledge, intergenerational learning fosters reciprocal learning relationships between different generations and helps to develop social capital and social cohesion in our ageing societies. Intergenerational learning is one way of addressing the significant demographic change we are experiencing across Europe and is a way of enhancing intergenerational solidarity through intergenerational practice.

Benefits of Intergenerational Learning (IGL)



The benefits of Intergenerational learning (Lifelong learning experiences) are:

- the sharing of knowledge and the utilization of experiences
- the development of solidarity and mutual understanding
- strengthening social cohesion and combating discrimination
- highlighting otherness as a factor that enriches life.

The social aspects of intergenerational learning are:

- It mitigates the consequences of the generational gap caused by rapid technological progress, different lifestyle that led to a lack of understanding, the creation of stereotypes and prejudices, and the reduction of positive interaction between older and younger generations.
- It is not only the differences that contribute to new knowledge and learning. Common experiences and lifestyles can unite people during this process, strengthen them, and contribute to a clearer understanding of what they experience in the social context, positive or negative.

Principles of Intergenerational Learning (IGL) (Generations Working Together)













- 1. Mutual and Reciprocal Benefit: All participating generations should gain benefits.
- 2. **Participatory**: The participants should be fully involved in shaping the activity and feel a sense of ownership - connecting the generations.
- 3. Asset Based: Build on strengths for success, understanding, and mutual respect.
- 4. Well Planned: Attempt to create positive changes which are an addition to naturally occurring processes.
- 5. **Culturally Grounded**: The needs context and attitudes of cultures differ widely. An approach adopted in one area may not work or be relevant in another due to these differences.
- 6. Strengthens Community Bonds and Promotes Active Citizenship: Engagement across the generations to emphasize positive connections with the aim of building stronger, better better-connected ties with increased social capital and citizenship.
- 7. Challenge Ageism: Both young and old are victims of ageism. Meeting each other means that they can explore who they really are and what they have to gain from each other.
- 8. Cross-disciplinary or Interdisciplinary: Broaden the experience professionals to become more involved in working in an inclusive way and to think much more broadly about how they undertake their work.

Values of Intergenerational Learning (IGL)

Intergenerational learning promotes several essential values, including:

- 1. Mutual Respect: Intergenerational learning encourages respect for individuals of all ages, recognizing the unique strengths and experiences each generation brings to the table.
- 2. Empathy: Through sharing experiences and understanding different perspectives, intergenerational learning fosters empathy, allowing individuals to appreciate the challenges and triumphs faced by others, regardless of age.
- 3. Social Cohesion: By bridging generation gaps and encouraging cooperation, intergenerational learning strengthens social bonds within communities, fostering a sense of belonging and togetherness.
- 4. Shared Knowledge: Intergenerational learning values the exchange of knowledge and skills between generations, ensuring that wisdom and expertise are passed down and preserved for future generations.
- 5. **Inclusivity**: It promotes an inclusive society where everyone, regardless of age, is recognized for their contributions, fostering a sense of community where each member is valued.

You can find more information in the GG Desk Research available on the GG website.













4.2. Engaging Different Generations in Climate Action

The Green Generations project will focus on Gen Z and Alpha and their interactions with other generations. Below, you will explore the categories of generations based on age, the importance of avoiding generational labels and tools to engage different generations in collaborative learning experience.

Generations' Classification based on Age

The following table depicts the categorization of generations based on the year of birth.

You can find more information on the specifics of each generation on the GreenGenerations Desk Research (Chapter 3, pp. 18-25).

Name of generation	Year of Birth	Reference to the Bulgarian Context
Elders	Before 1925	-
Builders	1925 – 1946	Traditionalists
Baby Boomers	1946 – 1964	Generation of Growth
Generation X	1965 – 1979	Children of Transition
Generation Y	1980 – 1994	Children of Millennials
Generation Z	1995 – 2009	Generation Z
Generation Alpha	2010 - 2024	Generation Alpha

Why should we avoid generational labels?

Generational labels, along with other identity markers such as age, gender, race, and socioeconomic status, play a significant role in shaping our perspectives and experiences. However, it is crucial to approach the study of generational differences with caution, especially concerning individuals from lower middle and lower socioeconomic groups. Furthermore, race and gender, integral aspects of individual identity, are often inadequately addressed when talking about intergenerational learning. Twenge (2006) has explored generational differences with attention to race and gender, suggesting a shift towards equality across races and predicts changes in gender dynamics, emphasizing the evolving nature of identity within generations.

Despite the interest in generational differences, the research landscape resembles that of learning styles, where weak scientific support challenges the validity and utility of the existing models. Similarly, the majority of scholarship focused on generational differences lacks robust empirical support. Therefore, it is essential for educators to approach generational differences with skepticism. Generalizations derived from













weak survey research and profit-oriented consultations should be treated with extreme caution in research and development contexts (Reeves et Oh, 2008).

In conclusion, while generational labels offer insights into shared experiences and perspectives, it is imperative to acknowledge their limitations. Researchers must exercise caution in applying broad generalizations to diverse populations, especially those from disadvantaged socioeconomic backgrounds. Moreover, thorough examination of generational differences should involve comprehensive studies encompassing race, gender, and socioeconomic factors. As the educational landscape continues to evolve, rigorous research methodologies are essential to explore the preferences, learning patterns, perspectives and communication styles of each generation, ensuring that assumptions are grounded in evidence and contributing to meaningful progress in the field of intergenerational learning.

Empathy Maps as a Tool for Building upon Generational Similarities

All people have core needs for values like respect, connection, competence, and autonomy. In that way, people across generations aren't different at all. While these needs are universal, the ways in which the different generations define and pursue the fulfillment of those needs can look quite different.

"Empathy map is a collaborative visualization used to articulate what we know about a particular type of user based on qualitative research. It externalizes knowledge about users." (Gibbons, 2018)

Empathy maps are powerful tools used to understand different perspectives and experiences by focusing on what people see, hear, think, and feel in specific situations. In the context of designing an intergenerational learning project for climate change, empathy maps help identify commonalities among different generations. By empathizing with various age groups, we can create a more inclusive and effective project that resonates with diverse participants. This tool aims to build empathy and spot common ground among generations, facilitating the development of a meaningful intergenerational learning initiative focused on climate change.













The empathy-mapping process helps distill and categorize your knowledge of the user into one place. It can be used to:

- 1. Capture a user.
 - It should act as a source of truth throughout a project.
 - Revise and adjust maps as



you proceed throughout the project stages.

2. Communicate to others: An empathy map is a quick, digestible way to illustrate user attitudes and behaviors. Once created, it should act as a source of truth throughout a project and protect it from bias or unfounded assumptions.

Remember: Empathy maps can be applied for exploring and empathising with different topics. For example, it can be used to empathise with:

- Communication styles
- Digital literacy
- Climate change attitudes
- Values

Activity no 2: Confronting Generational Labels!

Addressing the Challenges of Intergenerational Learning

Intergenerational learning comes with a greater challenge: the conflict of generations. Not a simple difference between the behaviour, tastes and aspirations of children and parents. But rather what the anthropologist Margaret Mead (1901-1978) called a "generation gap", due to the difference between traditional societies and "prefigurative" societies, in the sense of a reversal of the transmission of knowledge.

The gap is increasing both in terms of tools and content. There are generational references that the other generations no longer understand. the cultural "entre-soi" of young people, the culture of peer groups and not of fathers-mothers are much more powerful and create intergenerational ignorance.

The elements for successful learning environments in multigenerational learning are:

1. Mixed learning works best. The biggest mistake is to think older people want old-fashioned learning and young people want gamification.















- 2. The younger the person, the more frustrated they become if the content delivered is the same content they could just as easily find using a search engine.
- 3. Promotion of understanding, acceptance and respect.
 - each person/student is valued for individual contribution.
 - each student is respected for their strengths.
- 4. Communication is open.
- 5. Learning environment promotes project-based assignments that utilize the strengths of each member.
 - Specific individualized guidance is provided.
 - Function-based work projects are reduced or eliminated.
- 6. Technology is used to create interest and enhance content.

In addition:

- schools can build on the resources and support that children receive from their families and communities.
- partnerships developed between schools and local communities (employers, universities, public services...) enable to link the work of the school to the efforts of other local players / community.
- collaboration between schools and families/communities breaks the link between disadvantaged home backgrounds and poor educational outcomes.

<u>HOW TO... manage expectations when working with diverse generational groups?</u> Establishing clear expectations among participants in intergenerational learning initiatives within a school setting is fundamental to the success of the program. To effectively manage participants' expectations, co-design workshops are essential. These workshops provide an opportunity to ensure that all participants share the same "vision", are committed to the project goal and, while recognizing and appreciating participants' efforts and fostering a positive learning environment (Nye et Williams, 2022). Acknowledging the strengths and abilities of each participant is crucial, as it encourages active engagement and enthusiasm in the intergenerational learning experience.

Consistent review and reaffirmation of the project goals and pathways are vital to maintaining focus and direction. Clearly communicate the objectives and expectations to all participants, leaving no room for misunderstandings. Regular progress check meetings serve as a platform to revisit agreed-upon points, encouraging an open discussion for questions and suggestions. Embracing a positive and optimistic perspective while managing expectations can significantly enhance productivity and promote a sense of achievement among participants.

In addition, effective communication plays a pivotal role in setting expectations and ensuring the achievement of educational goals. Encourage an open flow of communication among participants based on agreed standards. Strong communication links between students of different age groups are as essential as the communication between educators and learners. This approach creates an inclusive













and supportive learning environment, fostering collaboration and minimizing potential conflicts.

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Activity no 3: Bringing generations together for climate action through co-design workshops!

Do's and Don'ts on how to bring generations together!

- 1. **DO recognise the value of intergenerational diversity.** Complex problems, such as climate change, require a wide variety of perspectives. Generational diversity is particularly important to tackling complex issues as it delivers the knowledge, perspectives and connections to increase creativity, innovation, and performance (Salas et al., 2018; Li et al., 2021).
- labels 2. DON'T use generational to reinforce negative stereotypes. Generational labels socially are widespread. There are situations where cohorts share similar experiences or attitudes that are influenced by the era that they were born into. Labels can be inexact and can veer into unhelpful stereotypes and pseudoscience. They can also be hurtful when they become discriminatory. Creating a team culture that discourages generational divisions and promotes generational diversity drives



increased engagement in the intergenerational learning experience (Homan, 2019).

- 3. DO acknowledge that generational differences exist... Social and educational influences can affect different generational groups differently. For example, Gen Alpha students get bored and distracted very easily when using traditional teaching tools. They expect strong stimuli in every environment. For some, these experiences and the labels that accompany them might speak directly to their experience and how they perceive climate change issues.
- 4. DO facilitate intergenerational learning. It's also critical to define what a "facilitator" is. Seeing the facilitator as an "amplifier" of the participants' abilities is one facilitation notion closely aligned with intergenerational learning. To do this, it would be necessary to find out about the abilities and interests of the participants and try to provide them with chances to assume significant leadership roles in introducing or demonstrating activities.











- 5. DON'T use frontal teaching. It is important for participants to discover and share knowledge through co-creation sessions, where they will explore concepts, share experiences and knowledge, and synthesize information to a tangible "project idea". Avoid giving direct instructions or indicating the correct answers without providing space for exploration and reflection. Remember also to replace giving lectures with encouraging brainstorming and discovery learning (e.g. through mind mapping).
- 6. DO encourage participants through positive reinforcement. The facilitator can act as a skills "amplifier" by using whatever means required to awaken latent or hidden skills and abilities. As many seniors do have physical limitations (such as a weak arm, impaired vision, slurred speech), have lost confidence in their abilities, or just require assistance with presentation organization, this is not a one-size-fits-all method. Similar to this, a lot of the students have unique talents (like music, art, etc.) that they'd be happy to contribute, but they lack the self-assurance and presenting skills necessary to assume a leadership position.



Check also the <u>TEDxHampshireCollege - Jay Vogt - The Art of Facilitation</u>: <u>Changing the Way the World Meets</u>, in order to explore more of the facilitation style, which is a core element for enabling intergenerational

projects.

4.3. The role of school in transferring intergenerational learning to Climate Change Education (CCE)

How does CCE nurture responsible citizens?

Climate change education plays a pivotal role in nurturing responsible citizens equipped with the knowledge and skills to address the challenges posed by a changing climate. Recent academic studies emphasize the transformative potential of climate change education in shaping environmentally conscious and socially responsible citizens. Research highlights the importance of fostering climate literacy and empowering individuals to engage in climate-related actions, indicating that an informed citizenry, educated through formal and informal educational channels, is more likely to participate in sustainable practices, advocate for climate policies, and contribute meaningfully to societal transformation (Radzi et al., 2022). By instilling a sense of environmental stewardship and fostering critical thinking, climate change education enables individuals to comprehend the interconnectedness of global environmental issues, encouraging them to make informed decisions that promote sustainability and social equity.















Furthermore, recent academic research, such as the study conducted by Anderson (2012) titled "*Climate Change Education for Mitigation and Adaptation*," underscores



the role of education in inspiring proactive climate responses to change. By integrating climate change education into formal curricula and informal learning spaces, individuals are encouraged to adopt climate-friendly behaviors, engage community-based in adaptation initiatives, and advocate for sustainable policies. This educational approach empowers citizens to recognize their agency in mitigating the impacts of climate change, promoting resilience, and fostering a sense of responsibility toward future generations. Through experiential learning, dialogue, and active

participation, climate change education nurtures a generation of informed and responsible citizens who are better equipped to address the complexities of climate-related challenges and contribute meaningfully to building a sustainable future.

How CCE fosters the development of 21st century skills?

Climate change education serves as a multifaceted platform that fosters the development of 21st century skills. Here's how:

1. Critical Thinking and Problem-Solving

Climate change education encourages students to analyze complex environmental issues, evaluate evidence, and consider multiple perspectives. By understanding the scientific principles behind climate change, students develop critical thinking skills to assess the impact of human activities on the environment and devise effective solutions to mitigate climate change effects (Vaughter et al., 2016).

2. Communication and Collaboration

Climate change education often involves group discussions, collaborative projects, and presentations. Engaging in these activities helps students improve their communication skills, express their ideas effectively, and work collaboratively with diverse participants, mirroring real-world scenarios where addressing climate change requires global cooperation (Sterling et al., 2017).

3. Information Literacy

Climate change education equips students with the ability to navigate through vast amounts of scientific data, climate reports, and research articles. By developing information literacy skills, students can discern credible sources, analyze data, and make informed decisions, which are essential skills in the information age where medial disinformation phenomena have widely arisen.

4. Global Awareness and Cultural Competency

Climate change education promotes awareness of global environmental issues, fostering a sense of global citizenship. Students learn about the interconnectedness of ecosystems and understand how climate change affects various communities













around the globe in a different way. This knowledge enhances cultural competency, encouraging students to appreciate diverse perspectives and develop empathy for those disproportionately affected by climate change (Shepardson et al., 2017).

5. Innovation and Creativity

Climate change challenges students to think innovatively and develop creative solutions. Encouraging innovative thinking, such as designing eco-friendly projects, sustainable practices, stimulates creativity, preparing students as future changemakers (Sandri, 2023).

6. Empathy and Ethical Decision-Making

Climate change education often explores the ethical implications of environmental degradation and climate injustice. Through case studies and discussions, students develop empathy for affected communities and engage in ethical decision-making, considering the long-term consequences of human actions on both the environment and society.



You can also check this <u>TedxTalk: Climate Change Education | Thomas</u> <u>Isaac | TEDxSouthFayetteHS</u>

4.4. Creating Sustainable Intergenerational Partnerships for Climate Action

What is a Strength Based Approach?

A strength-based approach emphasizes an individual's (in this case, students and adults) existing strengths, capabilities and resources. Those who embrace a strength-based perspective believe all people have strengths, resources and the ability to recover from adversity. This perspective replaces an emphasis on problems, vulnerabilities and deficits. A strength-based approach is developmental and process-oriented; it identifies and reveals a person's internal strengths and resources as they emerge in response to specific life challenges. A strength-based paradigm uses a different language to describe a person's difficulties and struggles focusing on the potential rather than on the deficit. In this case, this approach will enable both students and adults to overcome their differences and acknowledge the strengths and values of each other's opinions and attitudes.

Principles of Strength Based Approach

- What we focus on becomes a person's reality. Focus on what a person can do rather than on what they can't do. See challenges as opportunities to explore, not something to avoid. Start with small successes and build upon them to create hope and optimism.
- 2. Being mindful that the language we use creates a reality. (e.g., Saying "It looks like you tried doing this exercise another way; let's see how it worked for you." as opposed to saying, "Did you not hear what I told the other students?").
- 3. Belief that change is inevitable and all persons can and will be successful. All persons have the urge to succeed, to explore the world around them and to contribute to their communities.
- 4. What a person thinks about themselves, and their reality is primary. Therefore, educators must value and start the change process with what is important to













the members involved in an intergenerational project. It's the participants' story that's important, not the expert's.

- 5. Capacity building is a process and a goal. Change is a dynamic process. Your ongoing support of this change has a cumulative effect.
- 6. It is important to value differences and the essential need to collaborate. Effective change is a collaborative, inclusive and participatory process.

How to create Sustainable Partnerships for Intergenerational Climate Change Projects Step 1: Self-Assessment

Begin by assessing your knowledge through self-reflection exercises like creating a mind map detailing what you know about climate change causes and effects (Toolbox: Activity 1). For example, you could assess your recycling habits, energy consumption, or reliance on single-use plastics. Self-assessment can help identify areas for growth and areas where additional support may be needed in designing engaging activities or projects.

Step 2: Research and Learning

Commit to ongoing learning about climate change and its impacts. Utilize online courses, books, documentaries, and reliable websites to deepen your knowledge. You can start from the GG Desk Research, which provides a solid knowledge on climate change education through a compilation of various resources. By the end of the module, you will find also a list of freely accessible online resources (e.g. academic papers, videos, etc.).

Step 3: Curriculum Integration

You can integrate climate change education into various subjects. For instance, in science classes, students could study the impact of climate change on ecosystems. In language arts, they could analyze literature related to environmental issues. Mathematics classes could involve analyzing climate change data trends. Cross-disciplinary projects, like creating climate-themed art installations or organizing eco-themed debates, encourage creativity and critical thinking while integrating climate education seamlessly.

Step 4: Collaboration with colleagues

Collaboration within schools can involve creating interdisciplinary teaching teams. For example, a science teacher and an art teacher can collaborate on a project where students create artwork depicting climate change impacts. Beyond the school, collaboration with scientists, environmentalists, and local policymakers can provide students with real-world perspectives, enriching their understanding.

Step 5: Students' Engagement

You can employ interactive methods such as debates on climate policies, creating climate change podcasts, or organizing environmental fairs where students showcase eco-friendly projects. Engaging activities like organizing tree-planting or conducting citizen science projects enable students to actively participate in addressing climate issues, fostering a sense of empowerment.















Step 6: Family and Community Involvement

Organizing family eco-workshops where parents and students collaborate on Do It Yourself (DIY) recycling projects or community clean-up not only raises awareness but also strengthens the schoolcommunity bond. Engaging local businesses for sponsorships or involving community leaders in climate awareness campaigns enhances community participation.

Step 7: Environmental Action

Leading by example, you can initiate eco-friendly practices within the school, like recycling programs or energy-saving initiatives. Encouraging students to undertake environmental initiatives, such as creating a school garden or initiating a plastic-free campaign, instills a sense of environmental responsibility.



You will find more information and activities on how to design such projects within the school community on the Green Generations Curriculum.

Step 8: Ongoing Assessment and Reflection

You can assess students through various methods, such as project presentations, reflective essays, or peer evaluations. Rubrics assessing critical thinking, creativity, and depth of understanding can provide holistic feedback. Regular reflection sessions, both individually and collaboratively with colleagues, can identify successful strategies and areas for improvement, ensuring continuous refinement of teaching methods. You can utilize tools provided in Module 4 to gauge the effectiveness of their climate change education efforts and make data-driven improvements.

4.5. Project Management Aspects of Intergenerational Projects

Why team-building activities are so importance in intergenerational learning? One vital aspect that contributes to the success of intergenerational learning initiatives is team-building activities. These activities play a crucial role in fostering positive interactions, mutual understanding, and collaboration among participants,

thereby enhancing the overall learning experience. According to research bv Boström (2014), trust is fundamental for effective intergenerational communication and learning; engaging in activities that promote















trust and camaraderie strengthens the relationships between generations, creating a supportive environment for knowledge exchange.

Moreover, team-building activities enhance communication skills among participants. Effective communication is essential for intergenerational learning as it facilitates the exchange of diverse perspectives and ideas. Team-building activities encourage active listening, empathy, and clear expression of thoughts, enabling participants to engage in meaningful discussions and learn from each other's viewpoints (Kim et Lee, 2016).

Additionally, team-building activities promote a sense of belonging and community among participants. Intergenerational learning initiatives often involve individuals from different cultural backgrounds and life experiences. Engaging in collaborative activities fosters a sense of unity and shared purpose. Through interactive activities, participants can share their unique skills, expertise, and cultural knowledge, creating a rich learning environment (Rupčić, 2018). These exchanges contribute to the overall enrichment of participants' skills and competencies.



Activity no 4: Concentric Circles (to be implemented with your IGL group)

Project Management Aspects and Tools

Make it through the administrative procedures.

When planning to undertake an intergenerational project or activity in a formal setting it may be useful to consider how it aligns with local or national priorities (e.g. sustainability education, initiatives on recycling, inclusion, alignment with the curriculum, etc.). You can navigate through the website of your national education system (national level), and then through the website of your school (local and/or regional level) about national and regional/local strategic priorities that will help you integrate your intergenerational project as part of the formal curriculum

How to set S.M.A.R.T goals for your Intergenerational Climate Change Project?

To ensure the success of your IGL project, it's very important to clearly state the aim or target you intend to accomplish through the project making sure that it is specific, measurable, achievable, realistic and timely-bounded (S.M.A.RT.).











1st Primary School of Alexandria



SPECIFIC

Goals that are well-defined, detailed, and clear, have a much greater chance of being reached. To make a goal specific, try to relate to the five "W" questions (e.g. What I want to accomplish?).



MEASURABLE

A goal should possess measurability to enable tracking of progress and ascertain whether you are staying on course. It's essential to be able to identify when you've successfully achieved your goal (e.g. We aim to create 2 community gardens).

ACHIEVABLE

The goal should present a challenge and require effort without being excessively easy. It should be attainable with some dedication on your part, ideally pushing you slightly beyond your comfort zone.

Consider your available time, skills, and financial situation, and assess whether the goal can be reasonably achieved. Avoid setting goals that are overly daunting or overwhelming. If your objectives seem too ambitious, consider breaking them into smaller milestones or manageable steps.

REALISTIC

A goal must be realistically attainable within the specified timeframe and with the resources at your disposal.

TIMELY-BOUNDED

A goal should include both a commencement and completion date. Additionally, you must allocate sufficient time for each of the necessary steps to achieve it (e.g. We aim to create 2 community gardens during the school year).



Activity no 5: Setting learning goals for achieving learning outcomes!

Develop a Logic Model

A logic model is a systematic and visual representation that outlines the components, relationships, and expected outcomes of a program or project. It serves as a roadmap, providing a clear and structured way to plan, implement, and evaluate an ILG project. By breaking down the essential elements of a program, a logic model helps participants understand the logical sequence of activities and how they lead to desired outcomes. Here's an explanation of the key components of a logic model (Bressler et al., 2005):













Situation: Situation describes the issues or needs that vour project will address. Your situation should be specific and based upon a common issueproblem that participants aim to address.

E.g. The community faces а waste management problem. The school designs a project to address this issue. External



stakeholders (e.g. eco-activists, parents, etc.) want to eliminate the waste management issue within their community.

Inputs: These are the resources, such as funding, staff, equipment, and materials, that are invested in the program. Inputs are the foundation upon which the program is built, providing the necessary support for its activities.

E.g. Teachers, students, external stakeholders, space for meetings and activities (e.g. school), resources (e.g. for a recycling or composting bin), etc.

Activities: Activities represent the specific strategies, interventions, and actions undertaken within the program. They are the methods used to transform inputs into outputs. Activities are often organized into categories, detailing the steps taken to achieve the program's goals and objectives.

E.g. surveys or interviews with community members, meetings with the participants, creation of a recycling bin, study visit in a factory that creates recycling bins, etc.

Outputs: Outputs are the direct and *immediate* results of program activities. They can be tangible products, services, or events that are produced as a result of the program's efforts. Outputs provide a measure of the program's reach and the extent of its implementation.

E.g. (resources) 2 recycling bins set in the school and community gardens.

Desired results/Outcomes: Outcomes are the changes or benefits that occur as a result of the program's activities. They can be short-term (immediate effects), intermediate (changes occurring over time), or long-term (ultimate impact). Outcomes reflect the intended goals and objectives of the program and demonstrate its effectiveness in making a difference.

E.g.10 participants involved in the IGL project, community members involved in recycling, etc.















Assumptions: Assumptions are the beliefs and/or theory that inform your program planning decisions and provide "logic" to our logic model, providing real-life argumentation statements. They often consist of a series of "if-then" statements; for example, if you invest particular resources, then you will be able to conduct the planned activities.

E.g. If the planned resources will be gathered, two recycling bins will be put in the school and community gardens.

If the project participants disseminate the project goals, more citizens will be engaged in using the recycling bins.

Environment/ Influences: Environment/Influences describe the context in which your program will be implemented. It also includes external factors that may influence the project's implementation, progress or effectiveness.

E.g. Participants' beliefs on the topics under research may influence the project's implementation (see Activity), support from teachers, curriculum's timetable – need for adjustment.

Total duration of the module: 10 hours				
Setting	e.g. Face to Face (e.g. classroom) Virtual setting (e.g. Zoom, Google meet) and online collaborative spaces (e.g., Jamboard, Miro, Mural)			
<i>Outcomes</i> (4-5 major ones)	 Define the concept of intergenerational learning (IGL) and its relevance in the context of climate change education. Surface strategies for appreciate different conceptions in climate estimate through 			
	 2) Explore strategies for engaging different generations in climate action through intergenerational learning. 2) Employ intergenerational climate change education in the school context. 			
	4) Explore techniques for bringing generations together for creating impact towards climate change.			
	5) Design strategies for building and sustaining intergenerational partnerships for effective climate action.			
	6) Get access to project management tools for designing and running your IGL project.			
Contents	 Introduction to Intergenerational Learning and Climate Change Engaging Different Generations in Climate Action The role of school in transferring intergenerational learning to Climate Change Education (CCE) Creating Sustainable 			
	Creating Sustainable Intergenerational			













	 Partnerships for Climate Action Project Management Aspect of Intergenerational (IGL) Projects 		
Activities description (step by step) ¹	 Climate Change Timeline Confronting Generational Labels Bringing generations together for climate action through co-design workshops! Concentric Circles Setting learning goals for achieving learning outcomes! 	Type of activity	 Project-based learning (A7.1, A7.5) Reflective learning (A7.2) Brainstorming and co- design activity (A7.3) Team-building activity (A7.4)
Materials/ Suppli	es	markers, pencils	, flipcharts, notebooks, handouts,

5. Methodology used within the module

The methodologies used within this module are connected to knowledge, know-how and particularly skills that participants need, especially when facing an environmental transition challenge.

- Project-based learning leading to tangible results with a long-lasting impact.
- Collaborative learning for bringing participants together during each project's phase (preparation-implementation-reflection)
- Co-design as a core part of designing and implementing IGL projects for developing agency between the participants.
- Empathy mapping-Reflective learning to confront generational stereotypeslabels and build upon commonalities.
- Strength-based approach to build upon participants strengths
- Storytelling to foster experience and knowledge sharing among the participants.
- Team-building activities to build rapport and sense of belonging between the participants.

¹ The detailed steps for each activity are presented in the worksheets.













6. Case studies and Lessons Learnt

1. INVOLEN (Network for Promoting Environmental Education through Nature Conservation Volunteering and Intergenerational Learning) project

Organiser and stakeholders	Partner countries participating in the project: Greece, Italy, Hungary, France, Slovenia		
Framework	INVOLEN is a project promoting intergenerational learning through game-based learning, targeting nature conservation volunteers. It brings together two different age groups, adolescents and senior citizens, and encourages their participation in voluntary activities for the protection and preservation of the European ecological heritage. By bringing together two generations the program attempts to combine the skills, experience and knowledge of the seniors, with the dynamism, energy and enthusiasm of the young for the benefit of the protected areas.		
Description	Seniors and youth are challenged to work together in groups and create		
of IGL activity	their own mobile games, based in local protected areas and designed to encourage nature conservation activities and promote the culture of active citizenship. The learning experience is enhanced through "stories" told by the seniors about the little secrets of nature, myths, legends, and practices of biodiversity management of earlier times, which are collected and used for educational purposes by the young via the internet.		











Lesson

cability

Sharing stories is a powerful way to connect with others, transfer learnt/Appli knowledge and experience, as well as find common grounds. Storytelling, as it's called in pedagogical terms, is a powerful and ancient form of communication that transcends cultures and generations. At its core, storytelling is the art of conveying a narrative through words, images, or other mediums to engage, entertain, and communicate ideas. It serves as a vessel for sharing experiences, values, and knowledge from one generation to another. In the context of intergenerational learning, storytelling becomes a dynamic tool for passing down wisdom, traditions, and historical perspectives. By weaving information into compelling narratives, storytellers can capture the attention of learners and create a memorable and impactful educational experience.

> In intergenerational learning, storytelling facilitates the transmission of knowledge by embedding information within a context that resonates with the audience. The personal and emotional elements of stories make complex concepts more accessible and relatable, helping bridge generational gaps. Additionally, the interactive nature of storytelling encourages dialogue and active participation, allowing learners to ask questions, share their own experiences, and strengthen the bond between generations. This approach not only facilitates the transfer of practical skills and knowledge but also promotes empathy, respect, and a sense of continuity across different age groups, contributing to the overall well-being and cohesion of communities. In that way, storytelling can be employed to foster the sense of belonging and shared identity, transfer knowledge between younger and elder generations in terms of climate change and behavioral patterns over the years. Encourage your participants to share stories under specific topics – depending on the activity's goal (e.g. energy consumption, daily habits, transportation, etc.), and invite them to reflect on commonalities and differences.

https://involeneuropeancompetition.wordpress.com/involen/ Resources

2. Greener Together, Greener for our Planet

Organiser	Bulgaria	
and		
stakeholders		













	Framework	The initiative ' <u>Greener Together, Greener for our Planet</u> ', taking place in Bulgaria, raises students' consciousness about human-induced environmental issues and their lasting repercussions on Earth. By instilling a sense of responsibility, students are encouraged to actively contribute to creating a clean and secure world for generations to come. Participating schools have transformed into environmentally conscious institutions, implementing eco-friendly policies and practices. The project aspires to serve as a blueprint for Bulgarian communities, inspiring other educational institutions to embrace ecological measures. The initiative's connection to climate change and sustainability is evident through its five core themes: Water is Life, Keeping Our Environment Clean, Global Warming and Sustainable Development, Taking Action for a Cleaner Future. The project primarily engages students, involving them in every stage— from preparation to exchanges and activities. The target demographic comprises 1,000 pupils aged 14-16, representing diverse backgrounds, abilities, religions, and vocational training. A subset of 100 students actively participated in the exchanges. Finally, the project involved various external stakeholders, including Vocational Education and Training students, teachers, NGOs and local municipalities.
	Description of IGL activity	To prepare students for exchanges, they conducted research, interviews, and engaged with local authorities and NGOs. Exchanges involved student-created presentations and activities, fostering autonomy, creativity, and analytical thinking. The project emphasizes intercultural competence, communication, and social skills, promoting social inclusion and encouraging students to actively engage in their communities. Additionally, teachers benefit from professional development through communication and practice sharing with European peers, enhancing their teaching methodologies.
Lesson learnt/Appli cability		How were the external stakeholders involved? Stakeholder Mapping Workshop Teachers organized a co-design workshop with their students to map out all stakeholders involved in the initiative, based on the topic that they have already selected. More specifically, they created a visual stakeholder map indicating their roles, interests, and influence levels. This exercise helps in understanding the network and identifying key players.













	Knowledge-Sharing Meetings and Co-design Workshops with the Stakeholders Teachers encourage NGOs, VET trainees and local municipalities' representatives to share best practices, teaching resources, and innovative methods related to climate change education, and specifically to the topic of their initiative. Brainstorming and encouraging active participation ensure that diverse perspectives and expertise are considered. These sessions enhanced teachers' skills and enriched classroom experiences.
	Student-Led Surveys and Interviews Students conducted surveys and interviews within the community gathering opinions and concerns related to environmental issues. By analyzing the data to identify common themes and interests, the initiative's focus areas were guided by the community needs, thus fostering their engagement in the project. Keep in mind that as much as the project will address the needs of the participants involved, so their involvement will be more active.
Resources	https://www.planetfriendlyschools.eu/projects/greener-together- greener-for-our-planet

7. Toolbox (Worksheets)

Activity no	1:	Climate	Change	Timeline
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Worksheet Title	Climate Change Timeline	Worksheet Code	7.1
Type of resource	Activity	Type of learning	Self-directed, individual, project- based learning
Duration (in minutes)	60 minutes	Learning Outcomes	 Upon completion, it is expected that learners will be able to: 1. Understand the key concepts, cause and effects, challenges, and global/systemic vision related to climate change 2. Develop capacity to organise and interpret the cause and effects of climate change events















Aims	The aim of this activity is to introduce teachers to the concept of climate change, as well as the relations between "causes and effects" of climate change events.			
Materials Required	 Printed timeline of significant climate change events (for offline implementation) Online (freely accessible) tools for creating timelines (for online implementation) 			
Step-by-step instructions	Step 1: Read again the section 4.1. under the title "Causes and Effects of Climate Change".			
	 <u>Step 2</u>: Based on the knowledge acquired, search on the internet for freely accessible images that depicture climate change events. Suggested sites with freely accessible images: <u>Unsplash</u> <u>Pixabay</u> <u>Pexels</u> <u>Freelmages</u> <u>iStock</u> 			
	<u>Step 3</u> : For offline implementation, print a timeline template and the images that you found on the internet. For online implementation, log into one of the freely accessible online tools (as they included in this <u>article</u>) for creating timelines with an educational purpose.			
	<u>Step 4</u> : Connect the facts based on the relation "cause-effect". Many of the suggested tools provide also the opportunity to add text next to each image. Take it into consideration for creating a timeline that can be delivered to your students as an educational resource as well.			
	Note! Please take into account your environmental footprint of printing material, and opt for the online implementation, if possible.			

Activity no 2: Confronting Generational Labels!

Worksheet Title	Confronting Generational Labels!	Worksheet Code	7.2
Type of resource	Activity	Type of learning	Self-directed, individual/group
Duration (in minutes)	40 minutes	Learning Outcomes	Upon completion, it is expected that learners will be able to: 1. Understand how generational labels affect intergenerational learning.

























	Step 4: Identifying Common Ground Facilitate a discussion to identify common ground among the generations. Encourage participants to brainstorm ideas for the intergenerational learning project based on these shared concerns and interests. Emphasize the importance of inclusivity and collaboration in project design.	
	Step 5: Project Brainstorming In smaller groups or as a whole, encourage participants to brainstorm project ideas that leverage the identified commonalities. Discuss potential activities, workshops, or collaborative initiatives that address climate change while bridging generational gaps. Emphasize the strengths of each generation and how they can contribute to the project.	

Activity no 3: Bringing generations together for climate action through co-design workshops!

Worksheet Title	Bringing generations together for climate action through co- design workshops!	Worksheet Code	7.3
Type of resource	Brainstorming & Co- design Activity	Type of learning	Collaborative learning, brainstorming, reflective learning
Duration (in minutes)	70 minutes	Learning Outcomes	Upon completion of this unit, it is expected that learners will be able to: 1. Manage participants' expectations on intergenerational learning.
Aims	The aim of this session is to equip teachers with strategies on overcoming challenges of intergenerational collaboration by managing participants' expectations.		
Materials Required	 Blank paper, markers (for offline implementation) Flipchart/Whiteboard <u>Padlet</u> (for online implementation) Access to the Internet 		
Step-by-step instructions	<u>Step 1: Introduction (10 minutes)</u> Begin the session by explaining the importance of managing expectations in collaborative learning projects. Emphasize the benefits of having diverse backgrounds and perspectives of participants within the group. Highlight the benefits of clear communication and understanding each other's expectations. <u>Step 2: Expectation Brainstorming (10 minutes)</u>		













	Provide each participant with sticky notes and pens. Ask them to write down their expectations for the intergenerational learning project. These expectations can include what they hope to learn, their preferred communication styles, their roles and responsibilities, and any concerns they might have. Encourage participants to be specific and concise. In case you want to develop participants' digital literacy, you can use Padlet, in order to brainstorm in a virtual board.
	Step 3: Group Discussion and Categorization (20 minutes) Have participants share their expectations within small groups. Each group can categorize the expectations into common themes, such as learning goals, communication preferences, project outcomes, and teamwork. Facilitate a discussion within each group, encouraging participants to discuss the similarities and differences in their expectations.
	Step 4: Creating a Collective Agreement (20 minutes) Reconvene as a whole group and discuss the categorized expectations from each small group. Facilitate a collaborative process to create a collective agreement that outlines the shared expectations for the intergenerational learning project. Write down the agreed-upon expectations on a flip chart or whiteboard. Encourage participants to ask questions and seek clarification to ensure everyone is on the same page.
	Step 5: Reflection and Commitment (10 minutes) Ask participants to reflect on the collective agreement and its significance. Encourage them to commit to respecting and honoring the shared expectations throughout the duration of the project. Participants can express their commitment by writing a brief statement or signing the collective agreement.

Activity no 4: Concentric Circles

Worksheet Title	Concentric Circles	Worksheet Code	7.4
Type of resource	Team-building activity	Type of learning	Collaborative learning
Duration (in minutes)	20 minutes	Learning Outcomes	Upon completion of this unit, it is expected that learners will be able to: 1. Cultivate rapport and understanding between younger individuals and older adults.













			2.	Enhance awareness a the experien	participants' and respect for ces of others.
Aims	In this interactive session, participants of varying ages engage in a series of brief one-on-one discussions, providing them with a platform to share their experiences and emotions on diverse topics. The primary aim is to establish connections between young and older individuals, fostering mutual understanding and appreciation for each other's life journeys.				
Materials Required	No materials required.				
Step-by-step instructions	Step 1: Arrange chairs in tracircle. Step 2: Instruct the older the younger half takes seaders are each participant has been and the younger or older part the younger or older part with a new partner. Introde a minimum of four rounds Sample Discussion Promp > What aspects of your are your different age grout with a pour favour f	wo concentric circles, r half of the participa ats in the outer circle has a partner. o each pair for discuss ther to share their the ticipants to shift one s duce a new question f s. <u>our cultural backgrou</u> our cultural backgrou ou most eager to learn ips? st valuable lesson an ite childhood memor erred genre of music a te community you res	, with th nts to c , facing sion. All oughts. seat to or discu and fill y n about elder fig y. and its s ide in?	e inner circle occupy the ini their partners ocate a brief j Following this the right, pro- ission. Repeat ou with pride from individu gure has impa ignificance in	facing the outer her circle, while s (or vice versa). period (typically s, prompt either viding everyone this process for ? als belonging to arted to you. your life.

Activity no 5: Setting learning goals for achieving learning outcomes!

Worksheet Title	Setting learning goals for achieving learning outcomes!	Worksheet Code	7.5
Type of resource	Reading material and activity	Type of learning	Self-directed, individual/group, project-based learning















	Duration (in minutes)	60 minutes	Learning Outcomes	Upon completion of this unit, it is expected that learners will be able to: 1. Set S.M.A.R.T learning goals for an intergenerational project focused on climate change education	
	Aims	The aim of this session is to design a S.M.A.R.T action plan for aligning capac building in climate change with intergenerational projects.			
	Materials Required	 Notebook or digital document for note-taking and planning. Access to the Internet for research on resources on climate education (books, blogs, articles, websites). Notebook and Markers, Pens (for offline implementation) 			
	Step-by-step instructions	Step 1: Clearly state intergenerational clima achievable, realistic a subjects that can supp Step 2: Utilize the foll steps, establish priorit more editable and prin following the link.	the aim or target you ate change project maki and timely-bounded (ort an intergenerational owing S.M.A.R.T goals ies, and keep track of p table action plan templa - Write your goal he achieve? To minimi	intend to accomplish through your ng sure that it is specific, measurable, S.M.A.RT.). Identify the curriculum I climate change project. action plan template to arrange the rogress toward your goal. Download ates to aid in creating your action plan ere (e.g What learning outcomes I aim to ize the food waste in the school community)	
		S Specific	 Your goal should be specific actions to school community etc.). 	e well defined, detailed and clear (e.g. Target be taken for minimizing food waste in the v_r , such composting, community gardens,	
		M Measurable	ls your goal measura You should be able t	able (both qualitatively and quantitatively)? to tell when you reach your goal.	













A Achievable	Can you reach the goal, taking into account your available time, skills, and financial resources? Identify the resources needed to effectively complete each step, including tools, equipment, and personnel (e.g. a garden within the school, crops, equipment for composting, involvement of other colleagues, etc.).
R Realistic	Is your goal realistically achievable within the given time frame and with the available resources?
T Timely	Set a start and finish date for your goal. Set time limits for each step and establish an overall timeline for reaching the objective (e.g. one semester, one school year) Start Date: Finish Date
SMART Goal	Revise your goal based on the answers to the questions above.











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Green Generations: tackling climate change through intergenerational learning











