Education For Climate - Youth Climate LAB 3

How to include Traditional Ecological Knowledge into learning communities

Learning scenario

This learning scenario has been co-created during the EducationForClimate Coaliton's 2025 Youth Climate Lab. It is inspired by the process outlined in the Scaffold card game[1].

About

Title

Between tradition and modernity: The Green Debate

Summary

A debate where students engage in discussion about Traditional Ecological Knowledge (TEK) and Modern Ecological Knowledge (MEK). Learners defend a perspective, reflect on the other side, and explore how both knowledge systems can work together.

Keywords

TEK, MEK, Dialogue, modern science, sustainability, critical thinking, GreenComp, LifeComp, DigComp, EntreComp, Debate

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[1] Scaffold has been produced jointly by the European Training Foundation, in the framework of its Creating New Learning initiative, and the European Commission's Joint Research Centre, in the context of its work on key competences with the Directorate-General for Employment, Social Affairs and Inclusion.

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Introduction

Key issues

Lack of knowledge in TEK, the youth don't know a lot about TEK

Discrimination against traditional knowledge (meaning considering it less important), reflecting on collaboration methods

Scientific grounds for the development of the learning scenario

We based our method of panel, research, and a final debate on the EAST model (behavioural science), social science, and environmental science.

Target audience of this document

This document is meant for EU research center, educators, Local representatives, and Climate experts wanting to increase knowledge of TEK and MEK in the younger generation.

Short summary of the learning scenario

The learning scenario will start with a panel with researcher discussing different TEK and MEK Solutions to the climate crisis. After the debate, students, aged, 16 to 17, will do their own research into TEK and MEK solutions and at the end of the week they will have a debate. The goals of this learning scenario will be: 1) Educating young students on TEK. 2) Tackling the lack of knowledge among young students regarding TEK 3) Making TEK more accessible 4) The Panel debate will make TEK more accessible 5) Making greener, more eco-conscious, citizens 6) Encouraging critical thinking and debates among young students 7) Combining TEK with modern science.

Overview

For whom is this learning experience?

Student Age	Learning Level	Competence Level	Learning Setting
16/17 years old	Secondary general education	For beginner	Mixed

What are the goals of the of the learning experience?

1. Educating young students on TEK.
2. Tackling the lack of knowledge among young students regarding TEK.
3. Making TEK more accessible.
4. The Panel debate will make TEK more accessible.

5. Making greener, more eco-conscious, citizens. For example, encouraging students to choose more eco-conscious professional paths.
6. Encouraging critical thinking and debates among young students.
7. Combining TEK with modern science.

What are the subjects covered?

Subject(s)	**Specification**
Inter-disciplinary subjects	
Social Science subjects	Colonialism – different discourses – accountability for colonialism
Citizenship education subjects	How does the lack of citizens knowledge regarding TEK impact the climate? - Impact of not knowing TEK not included in education - creates ignorance Create green citizens/accountable adults.
Modern ecological knowledge	Western science regarding climate adaptation. Technology based interventions.

What are the topics covered?

- Traditional Ecological Knowledge
- Modern Ecological knowledge
- Colonialism and accountability

What shall learners produce?

- Output of the panel
- Increased knowledge regarding TEK and the related benefits and barriers related to it
- Familiarize them with the barriers on this journey
- Comparative knowledge on TEK and MEK

Which real life links are there to consider?

- Learning more about the real-world challenges when it comes to the climate crisis
- Feeling more connected to the regional knowledge
- Appreciating cultural heritage
- Acting local, thinking global – working regionally will improve global results
- Complimentary understanding of ecological knowledge. Expanding options for climate adaptation
- The barriers to utilize TEK in modern society

Which competences will learners work on?

Competences	Justification
European sustainability competence framework (GreenComp)	
1.3 Promoting nature and 1.1 valuing sustainability	They learn about ecological knowledge Regardless of TEK or MEK promotion of nature through adoption of indigenous people's mindset of being one with nature
1.2 Supporting fairness	Support equity. See both sides without discrimination. Both TEK and MEK debaters show respect by listening without bias.
2.1 Systems thinking	To approach a sustainability problem from all sides; to consider time, space and context in rdert o understand how elements interact within and between systems
2.2 Critical Thinking	Ability to compare and analyze types of ecological knowledge (TEK and MEK) in mixed learning setting
2.3 Problem framing	The panel and research will help to formulate current or potential challenges as a sustainability problem in terms of difficulty, people involved, time and geographical scope, in order to identify suitable approaches to anticipating and preventing problems, and to mitigating and adapting to already existing problems.
3.1 Futures literacy	Debate conclusion They envision like possible future problems and create possible solutions or prevention ideas
3.3 Exploratory thinking	Debaters ask questions through the research and debate process and consider solutions
4.1 Political agency	To navigate the political system, identify political responsibility and accountability for unsustainable behavior, and demand effective policies for sustainability.
4.2 Collective action	To act for systemic change and collective liberation.

4.3 Individual initiative	Through the research and debate the students learn to identify own potential for sustainability and to actively contribute to improving prospects for the community and the planet.
Digital Competence Framework for Citizens (DigiCOMP)	
1.1 Browsing, searching, filtering data, information and digital content and 1.2 Evaluating data, information and digital content	Preparing arguments for the debates through self/group research
The Entrepreneurship competence Framework (EntreCOMP)	
1.2 Creativity - Develop creative and purposeful ideas - 1.4 Valuing ideas - Make the most of ideas and opportunities	Develop several ideas and opportunities to create value, including better solutions to existing and new challenges. Judge what value is in social, cultural and economic terms. Recognize the potential an idea has for creating value and identify suitable ways of making the most out of it (during the conclusion of the debate)
2.4 Mobilizing resources - Gather and manage the resources you need	Get and manage the material, non-material and digital resources needed to turn ideas into action. Make the most of limited resources. Get and manage the competences needed at any stage, including technical, legal, tax and digital competences.
2.5 Mobilizing others - Inspire, enthuse and get others on board	Inspire and enthuse relevant stakeholders. Get the support needed to achieve valuable outcomes. Demonstrate effective communication, persuasion, negotiation and leadership
3.2 Planning and management - Prioritize, organize and follow-up	Set long-, medium- and short-term goals. Define priorities and action plans. Adapt to unforeseen changes.

3.4 Working with others - Team up, collaborate and network	Work together and co-operate with others to develop ideas and turn them into action. Network. Solve conflicts and face up to competition positively when necessary
3.5 Learning through experience - Learn by doing	Use any initiative for value creation as a learning opportunity. Learn with others, including peers and mentors. Reflect and learn from both success and failure (your own and other people's).
The European framework for the personal, social and learning to learn key competence (LifeCOMP) We have already included competences from the other Comps; therefore we will not repeat them here. These include, but are not limited to Communication, collaboration, and critical thinking.	
P1 Self-regulation Awareness and management of emotions, thoughts and behaviour	Awareness and expression of personal emotions, thoughts, values, and behaviour Understanding and regulating personal emotions, thoughts, and behaviour, including stress responses Nurturing optimism, hope, resilience, self-efficacy and a sense of purpose to support learning and action
S1 Empathy The understanding of another person's emotions, experiences and values, and the provision of appropriate responses	Awareness of another person's emotions, experiences and values. Understanding another person's emotions and experiences, and the ability to proactively take their perspective. Responsiveness to another person's emotions and experiences, being conscious that group belonging influences one's attitude

Which EducationForClimate Innovation Area(s) does the exercise cover?

Innovation Area	Justification
Raising Awareness	Research, the panel and the final debate create awareness on the climate crisis and possible solutions for the debaters and spectators.
Bridging Science with Education	Students since they don't know about TEK, and can't compare with wester/modern science

	Inviting experts give the students a broader and more scientific understanding of TEK and the climate crisis.
Developing green skills and competences	Research, the panel and the final debate create awareness on the climate crisis and possible solutions for the debaters and spectators.
Changing behaviours	They become more aware and conscious about the environment. Which will result in living more aligned with the planet in mind.

How are you going to learn?

Methodology	**Description**
Learner-led learning[2]	Learner-led learning is characterized by a teaching approach, which gives learners control, ownership, and accountability over their own education, while the educator acts as facilitator
Project-based learning[3]	In project-based learning, learning is framed as a project to address a challenge or problem, which happens in a real-world context.
Experiential learning[4]	Experiential learning is the process of learning through experience and reflection on the outcome. It differs from laboratory learning as it does not necessarily involve experiments.
Collaborative learning[5]	Collaborative learning is an instructional method in which learners work in small groups to accomplish a common learning goal with the guidance of the teacher.
Transdisciplinary learning[6]	Transdisciplinary learning is based on teachers' collaboration as leaners will develop knowledge and skills based on the integration of the perspectives of multiple disciplines to connect new understanding to real life.

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Where will the activity take place and with whom?

Space	Involved
Hybrid - Debate and panel in person - Research can be done from home	Students Teachers Local representatives Climate experts

Which tools and resources are needed to engage in the experience?

- Internet access
- Local knowledge sources: local elders and some books
- Video conference
- Online document tools
- Presentation tools
- Note-taking tools
- Timer
- Big hall/gym/area for physical panel and debate

How much time do you need to prepare for the exercise as an educator and as a learner?

Educator: Few months depending on the school

- Communication with climate experts and local experts
- Obligatory for the students. Integrated into the curriculum
- Preparation of the materials
- Draft questions for the panel discussions and the debate

Learner: 1 week

- Panel at the start of the week
- Research during the week
- Final debate at the end of the week

How much time will you have to run the activity?

Activity	Description and timing
1 week	- Panel at the start of the week - Research during the week - Final debate at the end of the week

How do you assess learners' progress?

Assessment method	**Comment**
Observation Peer feedback Self-reflection	Summary at the end of the debate through discussion