Edible Research: Hands-on Learning for Sustainability in Agroecosystems and Food Value Chains

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FORSCHUNG ZUM AUFESSEN Edible Research

World Food System Center

1 About the project

Edible Research is a **science communication** project designed and implemented by the research group Sustainable Agroecosystems and the World Food System Center [1]. Within the framework of this project, scientists, lecturers and students collaborate with secondary school teachers and teacher trainers to develop **learning materials and hands-on activities for teenagers**, aged 12 to 15.

The focus topic Sustainability in Agroecosystems and Food Value Chains is explored with all senses through activities such as:

- **role-playing** on palm oil production,
- **debate** on food labels and reduction of meat consumption,
- **visualizing the value chains** of rice, potatoes and maize,
- **experiments** on soil CO_2 emissions and
- **solar cooking** of tropical staple crops like teff, yams and cassava.

In 2017 and 2018 we reached out to approx. **350 teenagers and 120 adults** with our events.

2 Education for Sustainable Development

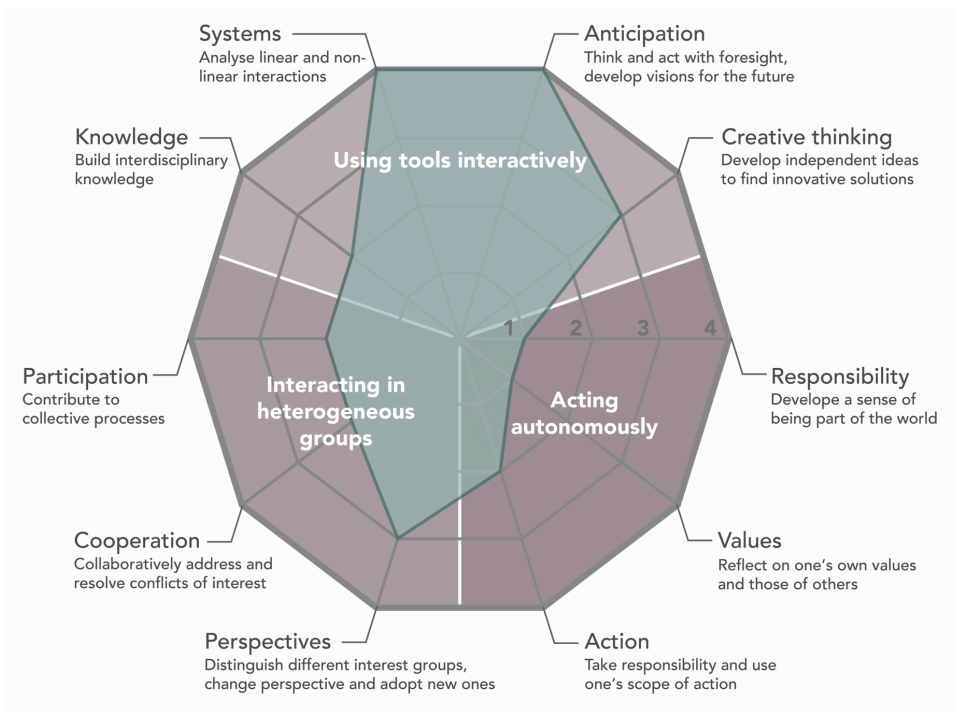

Fig. 1. The ten competences in Education for Sustainable Development (ESD) as defined by éducation 21 (2016) **[2]**, the Swiss national competence center for ESD. The competences are clustered in three domains: (1) Acting autonomously, (2) Using tools interactively, (3) Interacting in heterogeneous groups. The green polygon shows the competences that we specifically addressed with our ‚Edible research' role-playing game on palm oil. Key: 4 = strongly considered, 3 = considered, 2 = partly considered, 1 = slightly considered, 0 = not considered

3 Role-playing game on palm oil production

Fig. 2. In the Edible Research role-playing game on palm oil production teenagers take the perspectives of key stakeholders in the palm oil production value chain in Cameroon, i.e. students transform their classrooms to play the roles of farmers, transport companies, artisanal and industrial palm oil mills. Students 'harvest' palm fruits, negotiate prices and have to decide about legal or illegal deforestation, child labor on their plantations and putting money aside for taxes or investments.

Fig. 3. The game played with government officials in Cameroon. The original version of the role-playing game was developed in 2015 by the teams of Claude Garcia (Group Forest Management and Development, ETH Zurich) and Jaboury Ghazoul (Chair Ecosystem Management, ETH Zurich) together with WWF Cameroon, using the Companion Modeling approach **[3]**. The adaptation for Swiss secondary school level was elaborated and implemented by Manuel Stamm during his BSc thesis project in 2017 **[4]**.

4 Links

[1] http://www.worldfoodsystem.ethz.ch/outreach-and-events/dissemination-and-participation/agora.html

[2] http://www.education21.ch/sites/default/files/uploads/pdf_fr/edd/e21_Competencies_ESD_spider.pdf

[3] http://www.opal-project.org/opal-in-switzerland.html

[4] http://www.opal-project.org/uploads/5/0/1/3/50138087/role-playing_games_as_an_educational_tool_bsc_thesis_manuel_stamm_without_appendix.pdf

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OPAL Oil Palm Adaptive Landscapes

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