

The image depicts a vibrant, multi-level atrium. The top level features a glass and wood ceiling with a grid pattern. Below, a lush green courtyard with various plants, a circular water feature, and people walking is visible. The ground floor is filled with people sitting at long wooden tables, each with a laptop. The background shows a modern building with a glass facade and a city skyline. The overall atmosphere is bright and modern, emphasizing sustainability and technology.

Education for sustainable development beyond nature // culture

A conference of the German Rectors' Conference, Hamburg, 12/13 December 2024

Funded by the German Federal Ministry of Education and Research

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Education for sustainable development (ESD, 4.7 UN SDGs, 14 Earth Charter) is seen as a key enabler of a global sustainability transformation and urgently needed to answer the multiple existential challenges humanity is facing. However, as a deeply cultural concept education may not only be the solution but also part of the problem: Humans altered Earth's ecosystems and biogeochemical cycles, exposing the fallacies of the long-held belief in Western(ized) societies that culture and nature exist independently of one another. There is a sneaking suspicion that the idea of a nature-culture-divide played a vital role in the emergence of the unpleasant state of the Anthropocene. Hence, it is time to bridge the culture-nature dichotomy, embrace pluralistic forms of knowledge and empower humans to view themselves as part of an interconnected world.

Therefore, the conference seeks to discuss questions such as:

- How can ESD critically assess the role of education systems and practices that contributed to the problems of the Anthropocene?
- How can ESD address the disparities in contributions to climate change and promote climate justice?
- How can ESD transcend the nature-culture divide and promote the re-imagination of humanity's place in the world?
- How can ESD transform the way we create and share knowledge?
- What pedagogical strategies in ESD foster environmental and cultural stewardship among students?
- How can ESD integrate indigenous and traditional ecological knowledge as well as scientific approaches to bridge the nature-culture gap in the Anthropocene?

Location: Warburg-Haus Hamburg, Heilwigstr. 116, 20249 Hamburg/Germany

Participation: Free of any charge, however, due to limited space you are required to register to attend by e-mail to empower@hrk.de.

Organization: Jacobus Bracker, German Rectors' Conference, Berlin.

Funding: German Federal Ministry of Education and Research.

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Program

Thursday, 12 December 2024

- 12.00 registration
- 12.30 opening message
Dorit Schumann, German Rectors' Conference, Vice President for Transfer and Sustainability
- 12.45 introduction
Jacobus Bracker, German Rectors' Conference, Berlin
- 13.15 Naturentfremdung als pädagogische Herausforderung
Thomas Vogel, Heidelberg University of Education
- 13.45 break
- 14.15 Contesting neo-liberal homogeneity and reclaiming epistemic heterogeneity in Education for Sustainable Development: Relevance of Humanistic philosophies of Rabindranath Tagore and Jiddu Krishnamurti
Janbee Shaik Mopidevi, Innovate Teaching, Research, Advocacy & Consulting Services (ITRAC Global)
- 14.45 Using Theatre Workshops to Explore Climate Injustices with Young Students in the Niger Delta
Stephen Ogheneruro Okpadah, University of Warwick, Coventry, UK
- 15.15 break
- 15.45 New Museum Spaces for a Sustainable Future – Education Beyond Nature-Culture Binaries at the Foundation of Historical Museums
Mareike Ballerstedt – Dominik Hünninger – Kerstin Petermann – Heike Roegler – Nina Szogs
- 16.45 break
- 17.15 Language as a Bridge between Nature and Culture: Lessons from Ezequiel Uricoechea for an Integrative Education for Sustainable Development
Juan Manuel Espinosa Restrepo, Instituto Caro y Cuervo Bogotá, Colombia (online, local time Colombia 11.15 am)
- 18.00 evening reception

Friday, 13 December 2024

- 09.30 welcome coffee
- 10.00 Revival of Indian Knowledge Systems and Modern Education in India
Madhu, Miranda House, University of Delhi (online, local time India 2.30 pm)

- 10.30 Linking Traditional Ecological Knowledge and Western Science
Annette Scheerso, University of Bonn
- 11.00 Neotun: A Forgotten Place Where Nature and Culture Were One – Can Education
Lead Us Back?
Susanne Klaar, Klaar Design/RENN.nord
- 11.30 break
- 12.00 “The Western mindset is not the only correct one” – Integrating Indigenous and
Western views on nature through together-telling in Education for Sustainable
Development
Eva Ritter, Institute Nordic Perspectives, Flensburg – Jens Larsen, True Storytelling
Institute, Copenhagen
- 12.30 Integrating Soil Health Education in the Anthropocene Through Education for
Sustainable Development (ESD)
Alexandra Reith, University of Vechta
- 13.00 closing remarks
- 13.30 end

Abstracts

Alienation from nature as an educational challenge

Thomas Vogel, Heidelberg University of Education

According to the American philosopher Paul Hawken, the average adult in the western world knows over 1000 brand names or logos, but fewer than 10 local plants.¹ Industrial culture is increasingly directing human thought and action towards its own creation. In the attention economy of capitalist systems, natural phenomena are only noticed if they serve as a symbol of sympathy for brands. At the same time, people's lives are increasingly taking place in urban, simulated and technologically influenced spaces. Their everyday lives are increasingly determined by the use of digital media. This is creating a growing distance between man and nature, which is becoming an existential problem in view of increasing natural crises and requires educational approaches to overcome it.

The multiple nature crisis and the associated self-endangerment of human existence are closely linked to increasing alienation from nature. Alienation from nature comes from sociological and ecological literature and refers to the process by which people increasingly distance themselves from the natural environment, the animal and plant world, and the ecological context. They spend less and less time in nature and thereby lose direct contact and appreciation for it. Alienation from nature causes a loss of the feeling of connection and understanding of nature. This leads to people no longer perceiving, understanding or ignoring the effects of their actions on the natural foundations of life.

Various current studies show a growing alienation from nature. A literature study by a German-French research team (Cazalis/Loreau/Barragan-Jason 2023) shows that people are becoming less and less interested in nature. The authors of the study find that the human experience of nature is decreasing worldwide and that the presence of nature in cultural products is declining globally. People are living further and further away from natural areas and tend to engage with nature less often. At the same time, the researchers point to an urgent need for further research into global trends in human experience of nature.

The history of the Enlightenment begins with the distance between the *human subject and the natural* object, with the removal of humans from mythical contexts and their circular repetition. The Enlightenment is described as an "escape route of the subject from mythical powers" (Horkheimer/Adorno 1947/1975, p. 44), on which it grows stronger and separates itself from its oneness with nature. Its aim is to "take away people's fear and install them as masters", to dissolve myths and to overthrow "imagination through knowledge" (ibid., p. 7). In reality, however, the Enlightenment has regressed into a new mythology and is accompanied by a growing alienation from nature.

Overall, a development is emerging that Kahn (2007) describes as "environmental generational amnesia" and which can be translated as an increasing forgetfulness of the environment or nature. This alienation from nature contributes to people losing awareness of the diverse self-endangering effects of their actions on nature. The connection between their own lifestyle and its massive effects on ecosystems is ignored or trivialized. Measures to overcome alienation from nature are therefore more important than ever. To identify a

¹ The statement can be found in the commentary on a work of art by Tracy Bush at the Munich art exhibition "Flowers Forever" from February 3 to August 27, 2023. No empirical evidence for the statement could be found.

targeted educational response to the problem of alienation from nature, an analysis of the underlying causes of this development is of particular relevance.

The lecture outlines the connections between the modern human-nature relationship and the increasing natural crises. The phenomenon, the forms and various causes of alienation from nature are then analyzed to derive educational solutions from this. Methodologically, the lecture is based on the analysis of current research results on the alienation of young people from nature and theoretical pedagogical conclusions drawn from them.

References:

- Cazalis, V., Loreau, M., Barragan-Jason, G. (2023). A global synthesis of trends in human experience of nature. In: *Frontiers in Ecology and the Environment* 21/2, pp. 85-93. DOI: <https://doi.org/10.1002/fee.2540>.

- Horkheimer, Max; Adorno, Th. W. (1947/1975): *Dialectic of Enlightenment – Philosophical Fragments*. Frankfurt/M.

- Kahn Jr., Peter H. (2007). "The Child's Environmental Amnesia – It's Ours."

Children, Youth and Environments 17(2): 199-207. Retrieved from

<http://www.colorado.edu/journals/cye>. Published at:

https://faculty.washington.edu/pkahn/articles/497_kahn.pdf (accessed May 3, 2024).

Contesting neo-liberal homogeneity and reclaiming epistemic heterogeneity in Education for Sustainable Development: Relevance of Transformative philosophies of Rabindranath Tagore and Jiddu Krishnamurti

Janbee Shaik Mopidevi, Innovate Teaching, Research, Advocacy & Consulting Services (ITRAC Global)

Amid the significant challenges facing humanity, further intensified by the global COVID-19 pandemic, the UN 2030 Agenda for Sustainable Development calls for the urgent need to develop holistic, integrated responses to social, economic, and environmental issues at both individual and collective levels. The increased spread of globalisation with its inherent euro-centric hegemony that excludes all the other epistemic discourses and diverse philosophies with a sole agenda of economic rationale, productivity logic and instrumental purpose of education with a deep Nature Culture dichotomy is argued to be insufficient to tackle the unprecedented nature of challenges and to ensure epistemic justice and emancipatory purpose of education.

There is a pressing need to fundamentally rethink education and its role in promoting human well-being and development. This involves recognising the importance of education in fostering the skills, values, attitudes and behaviours necessary for inclusive and sustainable development. Against this backdrop, UNESCO's Futures of Education Initiative aims to reimagine how knowledge and learning can shape the future of humanity and the planet by equipping learners with diverse ways of being and knowing as opposed to Eurocentric, homogenous, linear, and hegemonic discourse of knowledge systems steeped in post-colonial legacies and post-industrial power structures.

Considering the increasing interest in decolonising curricula and education policies, this paper aims to explore the discourse of post-colonial and post-developmental perspectives in education. It contests post-colonial conformity and neo-liberal homogeneity by

reclaiming local and contextual epistemological philosophies. This perspective draws inspiration from the transformative philosophies of Jiddu Krishnamurti and Rabindranath Tagore. Throughout their lives, both thinkers advocated for holistic, transformative philosophies and educational methods, establishing alternative independent schools contest the factory model of schooling. This traditional approach often results in psychological dislocation and learner alienation, focusing narrowly on instrumental purpose of education while neglecting the deeper connections between nature and culture, undermining the various aspects that contribute to holistic living, development of an integrated human being and attainment of just society based on right relationships.

As an alternative, Krishnamurti and Tagore advocated for a holistic approach to learning that fosters a free and universal being capable of critical thinking, questioning, and action. They emphasised the importance of transformative learning that reflects the inherent harmony and interconnectedness of existence and belonging rooted in social, cultural, and historical contexts. Their vision aimed for a just society based on relationships that extend beyond immediate schools, communities, and societies to encompass the entire cosmos. The significance of their ideas in addressing the epistemic injustice that has long been present in the field of education for international development, which is often viewed from a unilateral Euro-centric perspective, is considered as a further implication of their transformative and alternative philosophies for educational policy and as an everyday democratic and sustainable practice.

Using Theatre Workshops to Explore Climate Injustices with Young Students in the Niger Delta

Stephen Ogheneruro Okpadah, University of Warwick, Coventry, UK

This study offers a reflection on participatory theatre workshops that took place between March to July 2023 in the Niger Delta region of Nigeria, a place marked with a long history of climate crisis. In exploring this, I remain alert to the possibilities and limitations of creating theatre in a location that is marked by climate crisis. Doing so allows me to consider, in greater depth, the particular context in which I worked with young students to create theatre. First, I reflect on the possibilities and limitations of applying participatory approaches that include equality of knowledge and reciprocity in theatre workshops on climate crisis with young students, to empower participants and produce citizens that are steps ahead of the facilitator. This implies participants' controlling the workshop process. This is against the backdrop of Maurya Wickstrom's argument that "TfD cannot be the ignorant schoolmaster, or the artist who leaves the spectacle intact, because it cannot leave the spectators (the to-be-developed) on their own to ... the theatre maker is always one step ahead of the student ... always more 'conscientized', more knowledgeable" (p. 104). While I see value in Wickstrom's position, I argue that the holistic participation of citizens in theatre workshops can produce participants that are steps ahead of the facilitator, in terms of the capacity for knowledge production. Here, I contend for the possibilities of participants as leaders of the Theatre for Development process, ahead of the facilitator, and how this allows for their empowerment, and how their perspectives and voices can resound more profoundly in the research process. This resounding of voices implies the state of participants being given the opportunity to express themselves about how they feel, and their experiences around the climate crisis.

I report on how in a workshop that I co-curated with young students in Otughievwen, in which I positioned myself in a role of the ignorant facilitator and applied a holistic

participatory approach, young people were able to unpack ecological unknowns around the injustice of deforestation. Holistic participation is the application of techniques and approaches by the facilitator in applied theatre, to promote participants' full ownership of the theatre process (Akoh 2021, Afolabi 2017). The features of holistic participation may include participants' controlling the research process that sets the agenda for the Tfd initiative. On the other hand, ecological unknowns are authentic knowledges around climate injustices and hidden understandings around environmental degradation, unearthed in the process of holistic participation.

I bring together my understandings and reflections on my role as the facilitator of this project to argue that the principles of integral participation of citizens can make participants have more to contribute to the Theatre for Development project than the facilitator. This also enables participants to express more expertise and understanding of the ecological unknown. I then reflect on the possibilities of how applied theatre exercises can become a tool to produce dissensus. Dissensus involves contesting the existing social order. It is drawn from the term dissent, which means disagreement: that which opposes existing structures that creates preference of certain groups over another (Ranciere, 1999, Jooste 2013). Dissensus is the rupturing of an existing culture, and way of doing. I refer to moments of dissensus produced by young people in theatre exercises on land displacement by local and transnational oil companies, deforestation by oil companies and local elites and gas flare by the oil companies in the Niger Delta. The study, therefore, focuses on the possibilities of applied theatre to function as a platform for young people to speak about issues that bother on climate justice.

New Museum Spaces for a Sustainable Future – Education Beyond Nature-Culture Binaries at the Foundation of Historical Museums

Mareike Ballerstedt – Dominik Hünninger – Kerstin Petermann – Heike Roegler – Nina Szogs

Museums have become important spaces for a new understanding of education and debates about sustainability. Historically, museums – especially the civic museums of the 19th century – have both been complicit in as well as critical towards the social construction of a supposed nature-culture-divide. A divide that has probably contributed significantly to the development of today's climate crisis and biodiversity loss. Therefore, museums are ideal spaces to re-address and re-consider these binaries while at the same time also critically assess concepts and practices of education for sustainable development in a cultural setting. At the same time, many museums are re-considering and re-interpreting their collections, as well as pursuing more democratic approaches to the production of knowledge. Collaboration and participation are two key ideas that include the expertise and perspectives of many different people and (activist) groups – expertise that we need for a sustainable future. In this new setting, several projects at the four museums of the Historic Museums Hamburg Foundation explore the possibilities of ESD to help foster an understanding for decisions throughout history, that lead to today's status quo as well as contemporary debates. Many of these projects also address questions on how museum (education) methods can help combat climate change and biodiversity loss, and how we can create spaces to implement climate justice within a collaborative framework.

Language as a Bridge between Nature and Culture: Lessons from Ezequiel Uricoechea for an Integrative Education for Sustainable Development

Juan Manuel Espinosa Restrepo, Instituto Caro y Cuervo Bogotá, Colombia

This study examines the intellectual trajectory of Ezequiel Uricoechea (1834–1880), focusing on his turn towards linguistics in the latter stage of his life, as a paradigmatic case for rethinking the relationship between nature and culture in Education for Sustainable Development (ESD). Through an analysis of his multidisciplinary work, spanning from chemistry and cartography to indigenous linguistics, we argue that Uricoechea's focus on language offers a valuable model for overcoming the nature-culture dichotomy that contemporary ESD seeks to transcend.

Our research reveals how Uricoechea, in adapting the European model of *Altertumswissenschaft* to the Latin American context, initially reproduced the tension between the valorization of indigenous cultural heritage and the promotion of territory as an exploitable resource. However, his subsequent concentration on the study of indigenous languages and Spanish phonetics suggests an implicit recognition of language as a domain where nature and culture converge.

We propose that Uricoechea's linguistic turn can be interpreted as an attempt to reconcile the apparent contradictions in his earlier work. Language, as both a biological and cultural phenomenon, embodies the intersection between the natural world and the human world. Indigenous languages, in particular, encode ecological knowledge and cosmologies that challenge the Western separation of nature and culture.

This analysis offers an innovative perspective for ESD, centered on the revaluation of language as a powerful tool for sustainable development education. We argue that the study and preservation of linguistic diversity, especially indigenous languages, can provide alternative models for relating to the environment. This approach goes beyond mere conservation of languages; it involves a profound reassessment of how language shapes our understanding of and interaction with the world around us.

Uricoechea's work with languages such as Chibcha, Páez, and Wayuunaiki offers a template for how ESD can integrate linguistic studies to deepen ecological understanding. These languages often possess rich vocabularies for describing natural phenomena, ecological processes, and biodiversity that have no direct equivalents in Western languages. By studying these linguistic structures, ESD can facilitate a more nuanced and contextualized comprehension of local ecosystems and global environmental challenges.

The revaluation of language in ESD, as inspired by Uricoechea's work, can serve as a means to preserve and transmit sustainable worldviews. Many indigenous languages reflect cosmologies that do not separate the human from the natural realm. By exposing students to these alternative paradigms through language study, ESD can foster critical reflection on Western assumptions about the relationship between humans and nature, potentially leading to more sustainable ways of thinking and acting.

Furthermore, this linguistic approach to ESD can promote the development of new pedagogical methodologies. For instance, participatory projects documenting traditional ecological knowledge in local communities could simultaneously enhance language preservation efforts and deepen students' understanding of sustainable practices. This

approach not only values local wisdom but also raises awareness of biocultural diversity, a crucial concept in contemporary sustainability discourse.

The integration of linguistic studies in ESD, following Uricoechea's model, also opens up possibilities for critical analysis of environmental discourse across cultures. By examining how different languages conceptualize and communicate ideas about sustainability, nature, and development, students can gain a more nuanced understanding of global environmental challenges and potential solutions. This cross-cultural linguistic analysis can help in developing more inclusive and effective sustainability strategies that resonate across diverse cultural contexts.

In conclusion, this study proposes that ESD can benefit significantly from an approach that places language at the center of its pedagogical practices. By following the path traced by Uricoechea, from natural sciences to linguistics, ESD can develop more holistic strategies that truly transcend the nature-culture division, promoting a deeper and more sustainable understanding of our relationship with the world. This linguistic turn in ESD has the potential to revolutionize how we conceptualize and teach sustainability, offering a bridge between diverse knowledge systems and fostering the intercultural competencies necessary for addressing global environmental challenges. By revaluing language as a key component of sustainable development education, we open new pathways for creating a more integrated, culturally sensitive, and effective approach to tackling the complex issues of the Anthropocene.

Revival of Indian Knowledge Systems and Modern Education in India

Madhu, Miranda House, University of Delhi

Education is universally recognized as the foundation of a nation's progress, playing a crucial role in shaping its future. In today's rapidly changing global environment, it is essential to continually refresh and adapt educational systems to stay aligned with current trends and meet the evolving demands of society. In India, despite numerous reforms over the years, the challenge of providing equitable access to quality education remains a persistent issue. This research seeks to explore how the Indian education system can be revitalized by incorporating traditional Indian knowledge systems. For instance, in Maichun village in the Kumaon region, of the Himalayas, the practice of *Pa/ta* involved the entire village working together to create compost for their agricultural fields. This activity not only fostered community ties but also produced high-quality fertilizer for farming.

Formal education has increasingly shifted its focus to the classroom, widening the gap between community-based knowledge and school-based learning. To help bridge this gap, the Uttarakhand Seva Nidhi Paryavaran Shikshan Sanstha, a local NGO operating in the Kumaon ranges of the Himalayas, introduced an environmental education curriculum into the school system. Titled *Our Land Our Life* (OLOL), the curriculum focuses on local issues and incorporates a pedagogy aimed at addressing the concerns of rural communities in the Kumaon Himalayas. OLOL connects classroom learning with real-world environmental challenges, drawing links between local problems and broader environmental issues. It encompasses not only environmental science but also education for sustainability, integrating traditional knowledge in a collaborative effort with local villages.

The paper will examine these knowledge systems in detail, exploring how they can be integrated into the current educational structure. It will also analyze the necessary curriculum changes to facilitate this integration and evaluate the potential benefits that may arise from their inclusion.

Linking Traditional Ecological Knowledge and Western Science

Annette Scheersoij, University of Bonn

The Anthropocene, marked by unprecedented human-driven environmental changes, has deepened the disconnect between nature and culture. This divide challenges societies to adopt holistic approaches to sustainability, recognizing the interconnections between ecosystems and human communities. This paper presents a new project that seeks to bridge this gap by integrating Traditional Ecological Knowledge (TEK) with Western scientific frameworks through collaborative educational initiatives.

TEK, deeply rooted in Indigenous cultures and passed down through generations, provides valuable insights for biodiversity conservation, resource management, and ecological resilience. However, TEK is often sidelined in mainstream scientific discourses that prioritize Western approaches. This project addresses this by fostering interdisciplinary experiences and dialogue that emphasize the complementarity between TEK and Western science. The project will integrate fieldwork, laboratory activities, and classroom learning, uniting secondary school pupils, university students, and scientists in a shared, experiential setting.

In the first phase of the project, pupils from two Indigenous schools in Northern Chile joined an international group of scientists and students from Germany, Chile, and Colombia for two days of research on biodiversity genomics in the Atacama Desert. Activities included field sampling and laboratory work for data analysis. Local Indigenous community representatives facilitated access to their territory, guiding the group through the field and sharing their knowledge of ecosystems, traditional land management practices, and the spiritual values associated with landscape protection. The group also participated in rituals that honored the land's cultural significance, deepening the integration of scientific activities with Indigenous environmental perspectives. By incorporating these activities into the pupils' daily school schedule, the project fostered ongoing dialogue among pupils, students, and scientists, promoting an exchange of views on science, culture, and sustainability. Interviews were conducted with pupils, teachers, university students, and scientists to explore their experiences and perspectives on the project. These interviews aimed to gather qualitative insights into how each group engaged with and perceived the common research activities.

The collaboration fostered a mutual appreciation of the distinct yet complementary contributions of TEK and Western science. TEK's holistic view and long-term ecological observations provided valuable context for interpreting phenomena often seen through a narrower lens in Western science. Western scientific methods, in turn, offered tools to formalize and expand on TEK observations. This integration led to a richer, interdisciplinary understanding of sustainability, leveraging the strengths of both knowledge systems to address ecological challenges.

For the pupils, this collaboration was particularly transformative. Their engagement with both TEK and Western science not only broadened their understanding of ecological phenomena but also enhanced their interest and self-efficacy in scientific inquiry. By

participating in the project, pupils gained new insights into how different knowledge systems can work together, fostering a deeper appreciation for both cultural and scientific perspectives. This approach linked cultural values with scientific inquiry, creating a more integrated problem-solving strategy that addressed real-world concerns of Indigenous communities, such as land management and conservation, while also contributing to broader questions about biodiversity and ecosystem resilience.

This interaction laid the groundwork for future partnerships and further educational activities. The project aligns with a broader vision of science education that promotes dialogical emancipation, critical global citizenship, and socio-ecojustice. Incorporating Indigenous perspectives into the science curriculum makes controversial and authentic socio-scientific issues—such as environmental degradation and cultural survival—central to science education. TEK offers a powerful lens through which learners can critically engage with the cultural assumptions embedded in scientific knowledge and practices. In doing so, the project fosters a deeper understanding of the nature of science as a dynamic body of knowledge shaped by diverse worldviews.

By combining TEK with Western science, the educational initiative also promotes intercultural and intergenerational understanding. Participants are invited to explore the intersections of their own beliefs, values, and experiences with different scientific concepts. This approach makes science education more relevant to students' lives, particularly those from Indigenous or marginalized backgrounds who may feel disconnected from traditional science curricula.

Ultimately, this project aims to create a more inclusive, culturally respectful, and relevant approach to sustainability that reconnects humans with both nature and culture. By fostering collaboration between Indigenous communities, scientists, and educators, it shows how TEK can be integrated into science education—not as a competing body of knowledge, but as a complementary framework that enriches our understanding of ecological and cultural resilience. The project's potential lies in its ability to bridge the gap between different knowledge systems, fostering mutual respect and understanding in the ongoing pursuit of a more sustainable future.

Neotun: A Forgotten Place Where Nature and Culture Were One – Can Education Lead Us Back?

Susanne Klaar, Klaar Design/RENN.nord

Introduction: The Separation of Nature and Culture as a Global Challenge

The separation of nature and culture is one of the fundamental challenges of our time. Education for Sustainable Development (ESD) is the key to restoring this lost balance. Neotun, a fictional place symbolizing the once harmonious relationship between nature and culture, represents the path back to a holistic worldview. Can education guide us back to Neotun, helping humanity understand itself as an integral part of an interconnected ecosystem where biodiversity serves as the connecting element?

Neotun: A Vision of Harmonious Balance

Neotun embodies the ideal interplay between natural processes and human systems. In the face of climate crises, biodiversity loss, and social injustice, a new educational approach is needed. Education must open the way to Neotun—a place where people learn from nature,

respect it, and live in harmony with it. Neotun is more than a return to the past; it is a vision for a future where culture and nature exist in harmony.

Methods: Service Design, Appreciative Inquiry, and Visual Communication

This presentation demonstrates how Service Design, Visual Communication, and Appreciative Inquiry (AI) can create transformative educational formats. Service Design develops interdisciplinary approaches to redesigning educational systems that foster empathy and respect for the interdependence of humans and nature. Appreciative Inquiry focuses on learners' strengths and promotes positive narratives that establish a culture of appreciation. Visual Communication expresses these concepts through tangible imagery, making the diversity of nature and culture palpable and highlighting the importance of biodiversity.

Appreciative Inquiry: Cultivating Strengths and Addressing Climate Justice

Appreciative Inquiry emphasizes existing strengths and resources, creating positive narratives that pave the way for a harmonious relationship between humans and nature. By focusing on the positive, it fosters a culture of appreciation and learning from successes. Biodiversity is used as a key to connecting cultural and natural diversity. Additionally, AI supports the development of inclusive educational strategies that unite social and ecological justice.

Visual Communication: Making the Diversity of Nature and Culture Visible

Visual Communication brings the diversity of nature and culture to life, emphasizing the importance of biodiversity as a central component of Neotun. By using infographics, storytelling, and visual metaphors, the complex relationship between humans and the environment is made accessible and emotionally engaging. Visual Communication bridges the gap between scientific and cultural perspectives by incorporating indigenous and traditional knowledge systems.

Practical Example: Urban Biodiversity Learning

The „Urban Biodiversity Learning“ project illustrates how learners in urban spaces explore local biodiversity and bring it to life through visual storytelling. By applying Appreciative Inquiry, positive experiences are utilized to create greater awareness of biodiversity. Supported by Service Design and Visual Communication, the complexity of urban ecosystems is made understandable and accessible.

Conclusion: Education as the Key to Rediscovering Neotun

Through the innovative combination of Service Design, Appreciative Inquiry, and Visual Communication, education can overcome the separation of nature and culture and rediscover the symbolic place of Neotun — a world where biodiversity and education are the keys to a sustainable and just future. These methods offer practical approaches that not only convey knowledge but also enable profound cultural transformations.

“The Western mindset is not the only correct one” – Integrating Indigenous and Western views on nature through together-telling in Education for Sustainable Development

Eva Ritter, Institute Nordic Perspectives, Flensburg – Jens Larsen, True Storytelling Institute, Copenhagen

“When you meet people from other cultures, you have to remember that the Western mindset is not the only correct one. There are many more ways to see nature and be in it.”

These words of a Sami doctoral student in Arctic Norway describe the challenge of ESD. Being widely recognized as a key concept to achieving a sustainable future, ESD needs to embrace different perspectives. This is particularly important with respect to Indigenous cultures, given that traditional Western views on nature and sustainability often differ significantly from Indigenous perspectives. Historically, Western educational frameworks have marginalized Indigenous knowledge. To overcome this, ESD must critically address the origin of its knowledge and include Indigenous voices.

Our research suggests together-telling, the sharing of personal stories and the reflection on common values, as a means in ESD to integrate the knowledge and views of Indigenous cultures in a respectful way.

Storytelling in ESD

Stories create emotions. Therefore, stories are well suited to convey knowledge and values. Personal stories are particularly credible. Together-telling, a method rooted in Indigenous storytelling traditions, is proposed to facilitate a more inclusive and respectful dialogue between diverse cultural perspectives in ESD. It aims at sharing personal stories within a group and reflecting collectively on the values embedded in these living stories. The method allows various voices to be heard and valued. It is a powerful tool for fostering mutual understanding and respect.

In the present project, the method was applied by collecting personal stories of people's view on nature and sharing the stories in an educational context. The results have shown that this way of working with living stories can integrate Indigenous and Western views on nature in ESD, even without a direct contact between Indigenous and non-Indigenous persons.

The study

More than 40 persons from Greenland, Norway and Southern Denmark were interviewed on their views on nature. The narrative interviews were recorded, transcribed and analysed to identify recurring themes. Coming from a variety of professions (educators, researchers, leaders, students, artists, politicians, etc.) and Western and Indigenous cultures, respectively, the interviewees were asked to talk about the role of nature in their life.

They touched on topics such as: having trust, finding calm and energy, dealing with resistance, accepting changeability, taking responsibility, using one's intuition, and strengthening communities. This resulted in the definition of seven key topics that relate nature to i) community, ii) education, iii) connectedness, iv) intuition, v) sustainability, vi) mental health, and vii) identity.

The educational tool

Based on the stories and the topics that emerged from them, an educational tool was developed with the aim to encourage learners to gain understanding from the diverse perspectives, to reflect on their own relationship to nature and to feel interconnected with the world. Fragments of the living stories were selected for the learning material and grouped according to the seven key topics. They were shared orally or as texts in educational groups. In addition, learners were invited to share their own stories through together-telling and to discuss their reflections in the group.

During together-telling, no comments are allowed when stories are shared. After each story, there is a short break when everyone remains silent. This creates a safe space for sharing personal stories (no comments) and supports deep-listening (silence). Stories shared in this way form together a new and often more nuanced story about terms and concepts.

Applications

The stories and the method have since been used in different educational settings, among other in the ESD training of teachers for Elementary schools, Secondary schools, and Vocational schools, in sustainability trainings for companies and in sustainability studies at universities.

The approach not only enriches the educational experience but also aligns with the broader goal of ESD: Together-telling facilitates both individual and collective learning, promoting sustainable transformation through collaborative dialogue. It helps strengthening the understanding of Indigenous perspectives across cultural boundaries. It can foster a more inclusive and holistic understanding of nature and sustainability. By acknowledging that no single perspective holds all the answers, educational initiatives can develop more nuanced and effective solutions for sustainability.

Conclusions

The findings of this research have several implications for ESD practice and policy. Firstly, by adopting together-telling, educators and policymakers can create more inclusive and respectful learning environments that acknowledge and value different ways of knowing and communicating. Secondly, the research advocates for a shift away from dominant global narratives towards a more pluralistic approach that recognizes the contributions of Indigenous cultures. This shift can lead to more holistic and contextually appropriate solutions to sustainability challenges. Finally, the research suggests that further exploration of together-telling and its integration into ESD could provide additional insights and benefits. By continuing to engage with Indigenous perspectives and collaborative methods, ESD can evolve to better address the complexities of sustainability in a globalized world.

Selected references:

- Larsen, Jens, David M. Boje, and Lena Bruun (2021) *True Storytelling. Seven Principles for an ethical and sustainable change-management strategy*. Routledge.
- Malone, Karen, Son Truong, and Tonia Gray (2017). *Reimagining sustainability in precarious times*. Singapore: Springer.
- Markussen, Ulunnguaq (2017). *Towards an Arctic awakening: Neocolonialism, sustainable development, emancipatory research, collective action, and Arctic regional policymaking*. In Kirsi Latola & Hannele Savela (Eds), *The interconnected Arctic* (pp. 305-311). UArctic Congress 2016. Springer Nature.
- Ritter, Eva (2023) "Together-Telling As a Means to Share Cultural Perspectives in Education for Sustainable Development: A Study from Greenland". *Academic Quarter* (26): 96-109. <https://doi.org/10.54337/academicquarter.vi26.8252>

- Ritter, Eva, and Jens Larsen (2023). *Naturens Lederskab. Arktisk og nordisk storytelling om natursyn, bæredygtighed og mental sundhed. Manual til et bæredygtigt liv.* Copenhagen: Snow Rabbit Press. 135 S.
- Rosile, Grace Ann, Boje, David M., and Carma M. Claw (2018). "Ensemble leadership theory: Collectivist, relational, and heterarchical roots from indigenous contexts". *Leadership*, 14 (3), 307- 328. <https://doi.org/10.1177/1742715016652933>
- Witmer, Hope, and Eva Ritter (2023) *Together-telling: The 7 Principles of Storytelling – A Co-created approach for Teaching Leadership for Sustainability in Higher Education.* *Organizational Storytelling Review* 1 (1), p. 94 -1043.

Integrating Soil Health Education in the Anthropocene Through Education for Sustainable Development (ESD)

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Introduction: Education for Sustainable Development (ESD) emerges as a central component in addressing the pressing challenges of the Anthropocene, urging a reevaluation of our educational systems and practices towards a sustainable future (UNESCO, 2020, 2017; Rieckmann, 2018). The urgency to devise new, transformative education approaches is paramount, aiming to enrich experiences with altered education and foster solutions to present and future sustainability issues. This paper delves into soil health education in Germany within the ESD context, proposing it as a vital bridge connecting nature and culture. Previous analyses by Beblek et al. (2019) and Xylander (2024) have demonstrated an array of efforts being organized in Germany to facilitate the discussion of issues related to soil. Nevertheless, broad public awareness remains lacking, indicating an urgent need for consciousness-raising methods in soil science education (Brevik, 2022).

Soil health can be understood as "the continued capacity of soils to support ecosystem services" (European Commission, undated). The essential ecosystem services provided by soils for the maintenance of human well-being are under considerable threat, whether it be from the advancing sealing of surfaces, consequences of industrialized agriculture, or not least the global warming of the climate and the associated extreme weather changes (Baer and Birgé, 2018; IPCC, 2019; Luig, 2024). Empowering learners, e.g. to rethink production, consumption or land use patterns towards sustainability. Adopting a system perspective is an essential aspect when developing and applying sustainability competences. (Singer-Brodowsky et al., in review).

Objectives: The primary objective of this sub-study is to enhance awareness of soil health throughout Europe by employing innovative educational strategies that critically evaluate existing teaching practices, encompassing higher education. This involves a blend of learning and knowledge forms—from scientific understanding to fostering actions, behavior support, and the development of interpersonal skills like moral values and care attitudes toward soil, thus cultivating emotional ties with the more-than-human world. Inspired by the European Union's (2023) Mission Soil, the study advocates for a profound comprehension of soil as a crucial, non-renewable life support, emphasizing the mission's focus on soil health and function restoration in Europe, alongside citizen engagement and awareness. To address a broad spectrum of target groups, a dual focus is placed on higher education institutions and their capacity to educate future professionals across numerous relevant sectors, including teacher training on the one hand, and their potential in transferring knowledge to the general public on the other.

Methodology: The study builds on the results of a stakeholder analysis and an expert network (Community of Practice) established at the national level, and employs qualitative research methods such as a focus group and interviews (N=10) with a diverse spectrum of stakeholders, ranging from university lecturers or teachers to NGO representatives to activist students. It is part of the LOESS project—a three-year initiative funded by the EU Horizon Project led by the Science Shop Wila Bonn, Germany—engaging a consortium of 20 partners from 16 countries (<https://loess-project.eu>).

Key Findings: Preliminary findings from the German segment underline the necessity to align soil education with the strategies indicated by the UN Sustainable Development Goals (SDGs) more strongly than in the past. This calls for augmented efforts to bridge the existing gap between nature and culture effectively, which holds promise for soil conservation and planetary health. An altered educational paradigm is sought that places care for soil health at the core of human attention, thereby cultivating socio-ecological understanding, transformative action skills, and a readiness to assume responsibility. Moreover, the study highlights the structured inclusion of soil health within German higher educational curricula but also points to the necessity for a deeper investigation into the quality of education and educator preparedness to deliver these topics.

Significance of the Research The outcome of this research is manifold, enhancing soil health education in Europe and contributing to the LOESS project's development of new educational strategies. These are essential for generating societal understanding of soil importance, which is crucial for instigating societal shifts in soil health management and reducing natural resource pressure. Furthermore, the findings stress the need for a comprehensive, integrated approach that encompasses a wide range of perspectives, systematically integrating them into educational programs. This multifaceted educational strategy merges experiential learning, practical engagement, and personal development with the transmission of knowledge. It emphasizes establishing collaborations to bridge gaps and cultivate relationships and dialogue among providers of various knowledge sources, experiences, and insights, thereby enhancing soil and environmental stewardship.

Conclusion This research highlights the integral of integrating soil health education within the broader SDGs framework, supporting a shift towards more sustainable practices and a profound respect for our planet's natural resources. By doing so, it addresses a fundamental aspect of sustainable development, advocating for an educated and informed society capable of making conscientious decisions for the Earth's and future generations' well-being.

References

- Baer, Sara G.; Birgé, Hannah E. (2018): Soil ecosystem services: an overview. In: D. Reicosky (Hg.): Managing soil health for sustainable Agriculture Fundamentals, Burleigh Dodds Science Publishing. Volume 1. Cambridge, S. 17–38.
- Beblek, A.; Lahaye, L.; Meiser, M.; Schmidt, K. (2019). Erarbeitung eines Leitfadens für die Kommunikation von bodenbezogenen Themen für Verbraucher und Konsumenten. Umweltbundesamt.
https://www.bmu.de/fileadmin/Daten_BMU/Pool/Forschungsdatenbank/fkz_3717_71_2810_leitfaden_kommunikation_bodenbezogen_bf.pdf.
- Brevik, E. C.; Krzic, M.; Muggler, C.; Field, D.; Hannam, J.; Uchida, Y.(2022): Soil science education: A multinational look at current perspectives. In: Natural Sciences Education 51 (1).
- European Commission (27 June 2022). Foster Soil Education Across Society. https://cordis.europa.eu/programme/id/HORIZON_HORIZON-MISS-2022-SOIL-01-07;
31.01.2024, 23:01

- European Commission (undated). A Soil Deal for Europe. 100 living labs and lighthouses to lead the transition towards healthy soils by 2030. Implementation Plan. Internal Working Document. <https://errin.eu/RI-Policy/missions/soil>
- European Union (2023). EU Missions. Soil Deal for Europe. https://mission-soil-platform.ec.europa.eu/sites/default/files/2023-10/FS-Soil-Deal-for-Europe_EN_042023_0.pdf. https://cordis.europa.eu/programme/id/HORIZON_HORIZON-MISS-2022-SOIL-01-07; 31.01.2024, 23:00
<https://loess-project.eu/>, 17.09.24, 12:12.
- IPCC, 2019: Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. <https://doi.org/10.1017/9781009157988.001>
- Luig, L. (2024): Bodenatlas 2024. In cooperation with I. Dewitz, T. Witte, D. Wannemacher, L. Stiem-Bhatia; J. Weigelt. Heinrich-Böll-Stiftung in collaboration with Bund für Umwelt und Naturschutz Deutschland, TMG – Think Tank for Sustainability, TMG Research gGmbH. Berlin.
- Rieckmann, M. (2018) Learning to transform the world. In: A. Leicht, J. Heiss und W.J. Byun: Issues and trends in Education for Sustainable Development. Paris: UNESCO, 39–59.
- Singer-Brodowski, M.; Henkel, G.-M.; Reith, A., Frank, P.; Rieckmann, M. (in Review): What is needed to act as a professional change agent for sustainability? A scoping review. International Review of Education.
- UNESCO (2020): Education for Sustainable Development. A Roadmap. ESD for 2030. Paris.
- UNESCO (2017): Education for Sustainable Development Goals. Learning Objectives. Unter Mitarbeit von Marco Rieckmann. Paris: UNESCO.
- Xylander, W.E.R. (2024): Mehr Bewusstsein für Bodendiversität. Defizite, Bedarfe, Transferansätze und –formate in Deutschland. Natur und Landschaft. 9/10. 445-451.