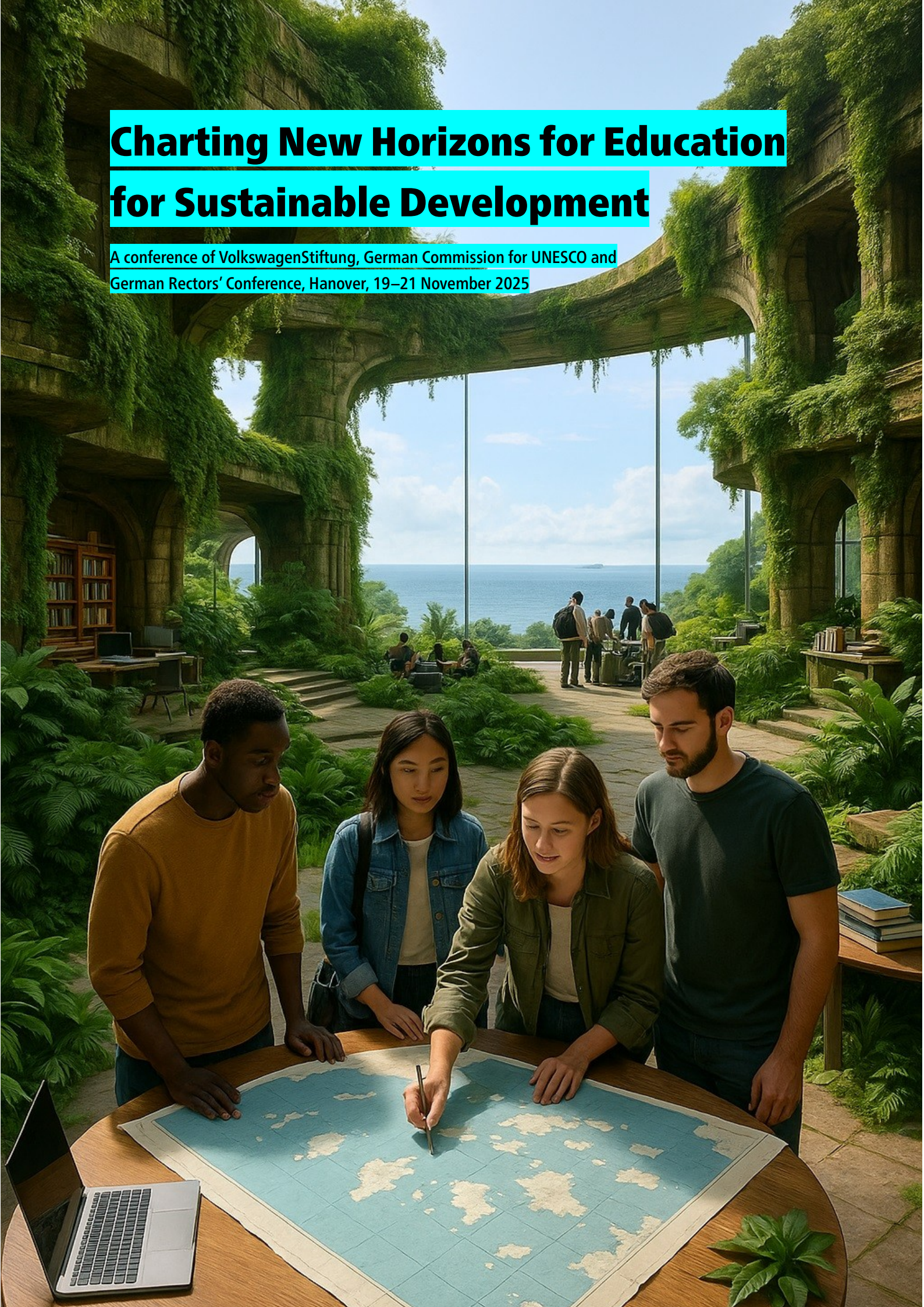


Charting New Horizons for Education for Sustainable Development

A conference of VolkswagenStiftung, German Commission for UNESCO and
German Rectors' Conference, Hanover, 19–21 November 2025



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Charting New Horizons for Education for Sustainable Development

International conference of VolkswagenStiftung, German Commission for UNESCO and German Rectors' Conference, Hanover, 19–21 November 2025

Call for papers

Education for sustainable development (ESD) is the key enabler of a global sustainability transformation. ESD goes beyond addressing the climate crisis; it tackles the complex and intertwined challenges of the global polycrisis humanity is facing. ESD covers all dimensions of sustainability; it creates the cultural and educational foundations for peace, diversity, democracy, global justice, and inclusion.

Higher Education plays a pivotal role in shaping sustainable futures. As institutions of knowledge creation and dissemination, Higher Education Institutions are key actors in transforming learning, research, and societal engagement for sustainability.

This conference will bring together researchers, educators, administrators, policymakers, and practitioners to discuss innovative and interdisciplinary approaches to ESD. A key part of the sustainability transformation involves looking to the past as we envision the future. Heritage – both cultural and natural – provides the stories, wisdom, and values that can guide us toward a more equitable and sustainable world. It tells us who we were, and more importantly, it shapes who we wish to become.

Join us in reimagining Higher Education for Sustainable Development!

We invite contributions that critically engage with the role of education in shaping sustainable futures, exploring how ESD can draw on heritage to inspire change and foster agency, in various ways, including storytelling, democracy, and institutional transformation.

The conference aims to explore ESD in four streams:

1) ESD, storytelling, and arts-based methods

Incorporating storytelling, arts, and creative methodologies into Higher Education fosters deeper engagement with sustainability. This stream explores:

- narrative and arts-based pedagogies for transformative learning
- the role of creative methodologies in fostering key sustainability competencies
- indigenous knowledge, decolonial approaches, and multimodal learning in Higher Education
- case studies of interdisciplinary, Culture and Arts Education for Sustainability

2) ESD and heritage(s) for the future

Higher Education Institutions are uniquely positioned to link cultural and natural heritage to sustainability education. This stream explores:

- the role of Higher Education Institutions in leveraging UNESCO World Heritage, UNESCO Biosphere Reserves and UNESCO Geoparks sites for sustainability education
- place-based and experiential learning in heritage and sustainability education
- the role of cultural and natural heritage in guiding us towards sustainable futures
- critical perspectives on heritage, environmental justice, and decolonization in higher education

3) ESD, democracy, and peace

Higher Education Institutions are democratic spaces for fostering critical thinking, civic engagement, and peacebuilding. This stream explores:

- ESD's role in fostering democratic citizenship and participatory governance in Higher Education Institutions
- peace education, conflict resolution, and social justice in Higher Education curricula
- the ethics and politics of sustainability in university governance and pedagogy
- case studies of universities as catalysts for democratic, peaceful societies and social cohesion

4) ESD and Whole-Institution Approach

A Whole-Institution Approach (WIA) integrates sustainability into teaching, research, operations, and community engagement. This stream explores:

- institutional strategies for embedding sustainability in Higher Education
- curriculum transformation for ESD in Higher Education Institutions
- sustainability leadership, governance, and policy frameworks in universities
- challenges and best practices in implementing whole-campus sustainability

Please submit an abstract (max. 800 words) of your proposed 20-minute presentation or 60-minute workshop outlining the title, objectives, methodology, key findings and significance of your research. Indicate, to which stream you see your abstract best placed. In addition, please submit a short academic CV until **15 July 2025**: empower@hrk.de. Notification of acceptance will be given latest by 30 July 2025. For speakers, funds for partial reimbursement of travelling costs and accommodation are available.

Venue: Xplanatorium, Schloss Herrenhausen, Herrenhäuser Straße 5, 30419 Hannover (in person only).

Organization: Jacobus Bracker & Maike Land, German Rectors' Conference Berlin // Bianca Bilgram, German Commission for UNESCO.

program

stream 1: ESD, storytelling, and arts-based methods

stream 2: ESD and heritage(s) for the future

stream 3: ESD, democracy, and peace

stream 4: ESD and Whole-Institution Approach

green: paper // blue: workshop // pink: specials

day 1: wednesday, 19 november 2025

12.00 registration and welcome coffee

13.00 welcome message

Tobias Schönwitz-Palm, VolkswagenStiftung

13.05 welcome message

Roman Luckscheiter, General Secretary of German Commission for UNESCO

13.15 introduction: widening horizons

Bianca Bilgram, Jacobus Bracker, Maïke Land

13.45 keynote: BOOSTing ESD: A Participatory, Research- and Action-Oriented Approach to Sustainability Transformation

Annette Scheersoï, Vice Rector for Sustainability, University of Bonn

14.30 coffee break

15.00 streams

stream 1	open islands	stream 3	stream 4
<i>facilitator: Jacobus Bracker</i>	<i>facilitator: Bianca Bilgram</i>	<i>facilitator: Maïke Land</i>	<i>facilitator: Coco Klußmann</i>
Is Greening Pedagogy in Education the only way out? A Study of Select Indigenous and Climate Narratives for Sustainable Environmental Engagement <i>Gurpreet Kaur</i>	Safer Space for Reflecting Sustainability Narratives with Living Libraries <i>Nayama Elsa Christy – Jeanine Marie Rühle</i>	The Ethics and Politics of Sustainability in Indonesian University Governance and Pedagogy under the Jokowi Administration <i>Warjio – Neni Juli Astuti</i>	Reflections on a Hopeful Vision of ESD in Universities at a Time of Existential Threats <i>Zulfi Ali</i>
The representation of environmental conflicts in contemporary German literature: an advocacy for environmental justice. The case of <i>Das Meer</i> (2018) by Wolfram Fleischhauer and <i>Der neunte Arm des Oktopus</i> (2020) by Dirk Rossmann <i>Nana Toumeni Julior Merlin</i>		Resisting Soft Authoritarian Regime in Nigeria: What Role could Academia's "Voices on Ink" Play? <i>Philipp Egbule – Jennifer Ibezim – Ogwudile Chinyere Mary</i>	The ORANGE Framework – Implementing Holistic Sustainability in Higher Education <i>Julia Krause</i>
Indigenous Practices and Creative Instruction: Enhancing Sustainability via Storytelling in Higher Education <i>Ravula Krishnaiah – Sakshi</i>		Students' Experiences of Higher Education in Emergencies as a Path to Peace and Sustainable Development <i>Mélodie Honen-Delmar</i>	Transforming Teaching and Learning across Higher Education Institutions: Whole of Institution Approaches Towards Sustainability <i>Blane Harvey – Daniel Fischer – Stephanie Leite – Claire Grauer</i>

16.30–17.00		coffee break	
Narratives of agency. Working with the mountains. A workshop of restoring and restoring hope <i>Senan Gardiner – Tamara Mitrafanenko</i>	Map/ing Sustainability: Eine partizipative Methode zur Förderung von Systemkompetenz und Nachhaltigkeits-Literacy in der Hochschulbildung <i>Kim Huber – Katja Kremser</i>	Unleashing global democracy and youth driven climate impact <i>Carolin Rautenberg – Daniel Michelis</i>	Towards a Systemic Policy Framework for Whole Institution Approaches to Sustainability in the UNECE Region <i>Jorrit Holst – Judith Klein – Jan Činčera – Niklas Gericke – Dafna Goldman – Mandy Singer-Brodowski – Aravella Zachariou – Arjen Wals</i>

18.00 coffee break

18.15 keynote: The Earth Charter and the education of the future
Sanne van Oort – Alide Roerink, Earth Charter International

19.00 dinner

day 2: thursday, 20 november 2025

09.00 Welcome message
Dorit Schumann, HRK Vice-President for Transfer and Sustainability, President of Trier University of Applied Sciences

09.15 keynote: Drafting sustainable future(s) – Heritage as change maker and the role of Higher Education
Gertraud Koch, Universität Hamburg

09.45 coffee break

10.00 *streams*

stream 1	stream 2	stream 3	stream 4
<i>facilitator: Maïke Land</i>	<i>facilitator: Marlen Meißner</i>	<i>facilitator: Coco Klußmann</i>	<i>facilitator: Lukas Klünemann</i>
Education for sustainable development in Greenland: the significance of cultural values <i>Eva Ritter</i>	Lausitzer Lernwelten – Educational Access in Transition: Cultural Heritage, Creative Methods and University Cooperation for Sustainable Development <i>Susann Troppa – Ellen Beuster</i>	From people affected to people involved: Universities as democratic learning spaces in global discourse <i>Katharina Lingenaus</i>	Students as Multipliers for Education for Sustainable Development at the University of Hildesheim <i>Clara Wiese – Sarah Gaubitz – Katalin Kuse</i>
Musik. Bildung. Nachhaltigkeit. <i>Julia Peters – Philipp Ahner</i>	Place-Based Learning in the UNESCO Global Geopark Vulkaneifel: Linking Natural Heritage to Sustainability Education through Higher Education Collaboration <i>Sabine Kummer – Andreas Schüller</i>	New paradigm thinking and skills need new forms of education – examples from the University of Freiburg <i>Elke Fein</i>	Co-Creating Sustainable Futures: Higher-Education Students as Co-Designers in Transformative Sustainability Education as an Everyday, Embodied and Relational Practice Project <i>Janbee Shaik Mopidevi – Agnes Zenaïda Camacho</i>
11.00–11.30		coffee break	
Getting ‘Radical’ – Tackling the Cultural Roots of the Modern Multicrisis through Decolonial and Relational Learning in/beyond ESD <i>Timo Holthoff</i>	Heritage Futures Workshop <i>Cornelius Holtorf</i>	From Reflection to Action: Youth Participation and Democratic Methods in Higher Education ESD <i>Phillip Gutberlet – Jeanine Marie Rühle</i>	Bridging Perspectives: How can status groups collaborate towards a Whole-Institution Approach? <i>Tim Brauer – Lee Heinlein – Andra Krogmann – Marieke von Elert – Jonas Weitzel</i>

13.00 lunch

14.30 keynote: Creating Synergy Between Education for Sustainable Development (ESD) and Global Citizenship Education (GCED): The Case of Soka University of America
Edward M. Feasel, President of Soka University of America

15.15 streams

stream 1	stream 2	port of refuge	stream 4
<i>facilitator: Bianca Bilgram</i>	<i>facilitator: Marlen Meißner</i>	<i>facilitator: Lukas Klünemann</i>	<i>facilitator: Jacobus Bracker</i>
Making Sense of Generative AI supported Sensemaking for Education for Sustainable Development <i>Christian Scheiner</i>	Transdisciplinary International Learning Lab (TILL) as a space for developing intercultural and global skills in the context of sustainability and biosphere reserves/regions <i>Heike Molitor</i>	Empowering Transformation through the Public Climate School: A Hands-on Approach to ESD in Higher Education and Society, part 1 <i>Phillip Gutberlet – Rahel Meier – Leona Klanck</i>	Transformative Curricula as Drivers for Organisational Change: The Transformation Module at Leuphana University Lüneburg <i>Lina Bürgener – Daniel Fischer – Laura Picht-Wiggering</i>
Vestimentary Sustainability in Higher Education: Creative and Participatory Teaching Practices for Transformative Learning <i>Lesley-Ann Baldwin</i>	Green Cities: Historical Perspectives on Sustainable Urban Living <i>Thomas Lekan</i>		A different approach to Learning: Johannes B. Ortner Academy for Sustainability and Transformation <i>Christian Holler – Georg Zollner</i>
use-less Milltour. Finding Regional Solutions through International Exchange. A Journey of Creative and Sustainable Education through Scotland and Lower Saxony merging Students and Academics with Regional Experts <i>Martina Glomb – Jule Eidam</i>	Surfacing Southern African Agroecological Heritage as a Nexus for Engaging Past, Present and Future in a Needs-Based Approach to Education for Sustainable Development in Higher Education Settings <i>Leonard Molefe</i>		Studium Planetare: A Case Study for Student-Led ESD Education with and within Culture and Arts <i>Lili Hillerich - Lisa Hoffmann – Klasse Klima</i>
16.45–17.15 coffee break			
Successful Integration of Transfer-oriented Higher Education for Sustainable Development into Academic Teaching - Case studies of interdisciplinary and Arts Education for Sustainability: Future.Now-Festival <i>Katja Kettner – Heike Scharpff – Heike Molitor</i>	Dung and Filāḥa: Genealogies of Fertilizer in Arabic Agriscience <i>Eyad Houssami</i>	Empowering Transformation through the Public Climate School: A Hands-on Approach to ESD in Higher Education and Society, part 2 <i>Phillip Gutberlet – Rahel Meier – Leona Klanck</i>	Transforming Futures: Higher Education Practice for ESD and the whole-institution approach (WIA) <i>Isabel Toman – Daniel Fischer</i>
	ESD through Heritage Education in Schools: Needs and Potentials for Developing Heritage Education as a Participatory, Future-Oriented Academic Field <i>Claudia Grünberg – Klaus-Christian Zehbe</i>		

18.15 coffee break

18.30 The UNITAR/UNESCO-initiative “Leaders in Higher Education Alliance and Programme – For Accelerating Sustainability Transformations” (LEAP-FAST)
Ebru Canan-Sokullu, UNITAR

19.00 dinner

day 3: friday, 21 november 2025

08.30 morning coffee/tea

09.00 keynote: Education for Sustainable Development in Teacher Training as a crosscutting task of higher education

Susanne Timm – Annette Scheunpflug, Universität Bamberg

09.45 streams

stream 1	cross current schools	cross currents	stream 4
<i>facilitator: Jacobus Bracker</i>	<i>facilitator: Lukas Klünemann</i>	<i>facilitator: Bianca Bilgram</i>	<i>facilitator: Maike Land</i>
Digging for Diversity – Exploring the concepts of regeneration and diversity in the context of sustainability through interdisciplinary and arts-based teaching <i>Julia Wiethüchter</i>	Education for Sustainable Development in Teacher Education for social transformation in Southern Africa <i>Sirkka Tshiningayamwe</i>	Integrating Educational Effects and Real World Outcomes in Education for Sustainable Development via Projects: Concepts and Experiences with the PPM-ESPRESSO Method for ESD Projects <i>Ulrich Holzbaur</i>	A University's Journey Toward Education for Sustainable Development Across All Disciplines <i>Markus Riederer – Anja Schlömerkemper, Julius-Maximilians-Universität Würzburg</i>
Transforming the World One Conversation at a Time: Hopeful Language Pedagogy as a Key to Reimagining Education for Sustainability and Global Citizenship <i>Ricardo Römhild</i>	LoLE – Leaders of Learner Empowerment <i>Daria Humburg</i>	Cultivating transformative agency: Empirical results from the ESD project #climatechallenge <i>Markus Szaguhn – Leonie Schröpfer – Annika Fricke</i>	Fostering transformative change – using a guided multi-stakeholder process as an institutional strategy for embedding sustainability in Higher Education <i>Leonie Bellina – Sonja Kleinod</i>
“Engaged Citizenship through Interdisciplinary Practice” – a STEAM approach to foster collaborative, interdisciplinary learning and student engagement with scientific sustainability research <i>Simone Gumtau – Matt Smith – Jules Pettitt</i>	Embedding Sustainability in Teacher Education: The integrated E:SD Whole-System Approach at Heidelberg University of Education <i>Alexander Siegmund – Florian Kohler</i>	Greening Vocational Education – A Case Study of adapting Eco-Campus Programme for Learning and Practice in Hospitality Schools <i>Pramod Kumar Sharma – François Schnoebelen</i>	The systemic Integration of ESD in Higher Education – Opportunities and Risks <i>Marlen Arnold</i>
11.15–11.45 coffee break			
The COLD MATTERS concept: changing perspectives in transformative learning <i>Eva Ritter – Inga Momsen</i>	Whole Institution Approach – an important leverage point for teacher education in ESD <i>Ann-Kathrin Schlieszus – Jorrit Holst</i>	Experiential Learning for Sustainable Development: Extramural Collaborations in Higher Education's Transformative Approaches <i>Hasnain Bokhari – Bettina Hollstein</i>	HRK – Audit – Sustainability in Higher Education Institutions <i>Corina Horeth – Jorin Meyer</i>
		Engineering for Sustainability – Teaching sustainability in a project-based degree programme to create benefits for students, university and region <i>Kai Masuch – Dirk Nissing</i>	

12.45 coffee break

13.15 presentation of graphic recording

Eva Feuchter

13.45 closing remarks

Bianca Bilgram, Jacobus Bracker, Maike Land

14.15 end of conference

abstracts

keynotes

BOOSTing ESD: A Participatory, Research- and Action-Oriented Approach to Sustainability Transformation

Annette Scheersoi

Introduction

Sustainability challenges demand transformative responses from higher education institutions, requiring them to evolve into active agents of societal change. The University of Bonn exemplifies such transformation through its comprehensive Whole-Institution Approach (WIA) anchored by the strategic BOOST program. This program systematically integrates sustainability across teaching, research, operations, governance, and community engagement. It is aligned with UNESCO's Education for Sustainable Development for 2030 roadmap (UNESCO, 2020), the Framework for Whole-Institution Approaches to Sustainability in Education (Holst, 2023) and rooted in educational models such as the Action-Oriented ESD Framework (Sinakou et al., 2019).

Institutional Strategy and Governance

BOOST provides a university-wide strategic framework embedding sustainability deeply into institutional structures. Its inclusive and participatory governance is coordinated by *Team N*, a collaborative body comprising the Vice Rectorate for Sustainability, a Sustainability Office, and the student-led Green Office. *Team N* facilitates cooperation across the institution and ensures that students, faculty, and staff are actively involved in shaping and implementing sustainability initiatives and contribute to the institution's sustainability transformation. This model fosters whole-university collaboration and supports a broad cultural shift towards sustainability.

Curriculum and Educational Innovation

The curriculum embodies Education for Sustainable Development (ESD) principles through participatory and action-oriented formats that connect academic learning with real-world challenges. Project-based courses foster competencies in collaborative problem-solving, critical thinking, and responsible citizenship. Examples of such courses include the interdisciplinary service-learning seminar *The Future Challenge* cultivating futures thinking and ethical reasoning, or *StadtKlimaWandeln* which enables students to collaborate with local governments and civil society on climate adaptation and biodiversity projects. Researchers and educational staff are supported through ESD development programs that promote transdisciplinary course design and draw on innovative methodologies such as game-based learning and co-creation.

Research Integration and Cross-sector Collaboration

Research at the University of Bonn is distinguished by its transdisciplinary and participatory character. As a core member of the *Bonn Alliance for Sustainability Research* – a network of six institutions addressing complex issues such as bioeconomy, digitalization, climate resilience, migration, and global health – the university mobilizes integrative research with societal relevance. Climate and environmental ethics are embedded into research through co-creative spaces that bring together researchers, policymakers, and citizens to foster responsible knowledge production. A dedicated program for laboratory staff promotes sustainable practices in research environments, including participation in the international LEAF (Laboratory Efficiency Assessment Framework) program.

Operational Sustainability and Campus Management

Sustainability is also integrated into daily campus operations. Procurement policies prioritize environmentally and socially responsible suppliers; energy management focuses on consumption reduction through smart monitoring and renewable investments like photovoltaic systems; mobility initiatives encourage cycling, and cargo bike use. Additionally, waste reduction and sustainable catering

reflect a holistic operational commitment. The student-led interdisciplinary Campus Greening project further advances biodiversity, involving all faculties in enhancing campus ecosystems.

Challenges and Lessons Learned

Implementing a WIA presents inherent complexities, such as aligning diverse faculties and administrative units, fostering culture change, and effectively reaching students who, despite ample opportunities and general interest in sustainability, often remain disengaged or difficult to mobilize. The BOOST program's emphasis on participation and co-creation has been vital in overcoming these challenges and fostering shared ownership of sustainability goals. By recognizing and incorporating the diverse ideas and perspectives of university members, the program draws on this variety as an important contributor to its effectiveness. Quarterly "action months" engage the entire university community in translating sustainability principles into everyday life, strengthening collective efficacy and motivation. The activities organized during these months are intentionally diverse, ranging from sports and cooking to environmental actions and creative workshops, in order to engage a broad spectrum of university members by appealing to their varied interests. Clear and consistent internal and external communication has also proven essential for fostering participation, raising awareness and building accountability. Transparent monitoring and external recognition reinforce these efforts and drive continuous improvement. Together, these experiences underscore the necessity of embedding sustainability structurally and practicing it in everyday university life (cf. Holst et al., 2024) as a core element of the institution's identity, rather than treating it as a peripheral agenda.

References

Holst, J. (2023). Towards coherence on sustainability in education: a systematic review of Whole Institution Approaches. *Sustainability Science*, 18(2), 1015-1030. <https://doi.org/10.1007/s11625-022-01226-8>

Holst, J., Grund, J., & Brock, A. (2024). Whole Institution Approach: measurable and highly effective in empowering learners and educators for sustainability. *Sustainability Science*, 19, 1359-1376. <https://doi.org/10.1007/s11625-024-01506-5>

Sinakou, E., Donche, V., Boeve-de Pauw, J., & Van Petegem, P. (2019). Designing powerful learning environments in education for sustainable development: A conceptual framework. *Sustainability*, 11, 5994. <https://doi.org/10.3390/su11215994>

UNESCO (2020). Education for sustainable development: a roadmap. <https://doi.org/10.54675/YFRE1448>

Annette Scheersoi has been the Vice Rector for Sustainability at the University of Bonn since May 2021. Her re-election for a second term until 2029 was recently confirmed. Annette coordinates the sustainability transformation process following a Whole-Institution Approach, based on a participatively developed sustainability strategy. Since 2013, Annette Scheersoi has been a Professor of Biology Education and a research group leader at the University of Bonn. Her research interests include environmental education, sustainability education, and science communication. She is the project leader for various research-education projects, all positioned at the intersection of science and society.

The Earth Charter and the education of the future

Sanne van Oort – Alide Roerink, Earth Charter International

The Earth Charter is a people's document and ethical framework, born from a decade of international dialogue, and offers the shared value base higher education needs to navigate today's polycrisis and to turn conscience into action. Around the world, education systems are being asked to solve more and faster, climate, peace, democracy, inclusion, while still operating with curricula, assessment, and governance models designed for a more linear, industrial era. This keynote names that tension and

proposes the Earth Charter as part of the journey of transformation. Grounded in its four interdependent pillars, Respect and Care for the Community of Life, Ecological Integrity, Social and Economic Justice, and Democracy, Non-Violence and Peace, the Charter calls education to shift from ego to eco, from separation to interbeing. The keynote presents the history and relevance of the Earth Charter for different actors in society and argues that “education of the future” must be education that is sustainable, and that this happens when learning is experiential, value-driven, and mission-oriented toward real societal challenges. It shows how Earth Charter International, through its Education Center in Costa Rica and global network, has translated the Charter into concrete programs and educator training that help learners act on their values, not just understand them. It illustrates how circle spaces, storytelling, and connection with place nurture agency and planetary responsibility, the very capacities today’s universities say they want but often do not yet know how to cultivate. These approaches resonate with the ESD I–III progression, from cognitive learning to reflexive and affective learning, to action competence. Positioned this way, the Earth Charter becomes an ethical foundation for the SDGs and, at the same time, a practical guide for redesigning programs, partnerships, and campus culture. The keynote invites participants to embed Earth Charter principles in curriculum and strategy; to design mission-oriented challenges with students; and to make interdependence visible across disciplines so that the education system can actually deliver what society now asks of it. In doing so, higher education becomes a living lab for just, peaceful, and ecological futures, and the Earth Charter stands as a companion for that transformation.

Sanne van Oort is a passionate educator, permaculturist, and creative advocate for Regenerative Futures with extensive international experience in sustainability and nature-based education. She is a co-facilitator for the Earth Charter’s ‘Education for Sustainable Development’ (ESD) program. As a co-creator of the Education Changemaker Academy in The Netherlands she is committed to nurturing educators as catalysts for systemic change. Her facilitation style is shaped by her background as a performing artist and is deeply experiential and nature-connected. Sanne was a manager at Green School Bali, where she co-developed and led the Green Educator Course, training teachers from around the world in regenerative education. In Vietnam, she worked as Director of the International Program and Green Education. She is also the founder of the organization ‘Mother Jungle’, an educational platform that shares Indigenous knowledge through film, storytelling, and cultural exchange. Her documentaries have been showcased at international film festivals, amplifying essential narratives about ecology, culture, and sustainability. She previously taught International Business at Zuyd University of Applied Sciences, where she also conducted research within the Research Center for Sustainable International Business. She now lectures on Sustainability at Avans University of Applied Sciences, with a special focus on Regenerative Business and ‘Two-Eyed Seeing’, bridging Western perspectives with Indigenous ways of knowing and rituals that connect students in higher education to nature and collective wisdom. Sanne is currently working as a Lecturer Regenerative Gastronomy & Experiences at the University of Applied Sciences ‘Hotelschool The Hague’ (HTH).

Alide Roerink is an anthropologist and has been involved over the years in networking, advocacy, and policy development for gender justice, international solidarity, and global governance. Alide was coordinator of *Vrouwenberaad Ontwikkelingssamenwerking*, a network of gender experts in development agencies in The Netherlands. Between the year 2000 and 2013 she worked at the National Committee for International Cooperation and Sustainable Development (NCDO).

Alide coordinated the NCDO Earth Charter programme and the Round Table of Worldconnectors for People and the Planet. NCDO served for many years as EC Affiliate to Earth Charter International and cooperated with the Earth Charter Initiative in the launch of the Earth Charter in 2000 in the Peace Palace in The Hague, in the Earth Charter+5, +10 and +15 Events in The Netherlands. Alide Roerink initiated and co-edited the book *Earth Charter in Action: Towards a Sustainable World*. Alide Roerink was advisor to the Earth Charter Initiative before she joined the Council.

Currently she is active as family farmer of a food forest, next to taking part in the Earth Charter ‘ShareHood’ community in The Netherlands (<https://www.earthcharterdeelgenootschap.nl/>).

Drafting sustainable future(s) – Heritage as change maker and the role of Higher Education

Gertraud Koch

In the last decade, heritage has undergone a shift, moving from being a custodian of ancient traditions to becoming an instigator of change, inspiring and fueling transformation. This new understanding of heritage is stimulating research and higher education paradigms. It fosters cross-disciplinary thinking by connecting relevant disciplines, sectors and actors for sustainable development. This understanding of heritage is connected to balancing care for all dimensions — ecological, economic, social and cultural — while exploring trajectories and pathways towards sustainable development. However, heritage's potential as a source and driver of a sustainable future(s) does not unfold automatically or in the same way for all heritages. Moreover, it requires joint efforts within higher education to establish relational thinking about sustainable development that includes but also goes beyond CO₂ neutrality. This paper outlines the contours of this shift in heritage, providing examples of its productivity and demonstrating how to incorporate it into (higher) education.

Gertraud Koch is Professor and Chair of the Institute of Anthropological Studies in Culture and History at the University of Hamburg. She has coordinated the Horizon 2020 funded European Training Network POEM on Participatory Memory Practices. *Concepts, strategies and media infrastructures for envisioning socially inclusive potential futures of European Societies through culture* (www.poem-horizon.eu). From 2014 to 2022 she has been Vice Speaker of the Expert Committee on Immaterial Cultural Heritage of the German Commission for UNESCO.

Creating Synergy Between Education for Sustainable Development (ESD) and Global Citizenship Education (GCED): The Case of Soka University of America

Edward M. Feasel

This paper examines the synergy between Education for Sustainable Development (ESD) and Global Citizenship Education (GCE) at Soka University of America (SUA). SUA opened its doors in 2001 as a 4-year private liberal arts college in Southern California with the specific mission to foster global citizens who live a contributive life. In 2015 the United Nations adopted the Sustainable Development Goals (SDGs) with goal 4 of quality education and target 4.7 focused on promoting global citizenship education. As such, SUA had instituted an institutional approach to global citizenship education and sustainability well over a decade before the SDGs emerged. This paper will address three important areas of institution wide efforts of ESD in synergy with GCED. The first is a curricular innovation implemented at SUA since its inception. SUA's academic calendar was created with a 3.5-week January block in between traditional semesters. All first- and second-year students enroll in a class called a learning cluster (LC) (third year students have the option to take the course as well). The LC has 12 students and is led by a single faculty member. The course is designed as a research seminar attempting to bridge theory and practice by focusing on a real-world issue/topic. The academic scheduling allows students and faculty to investigate the issue at hand without any scheduling conflicts since students are only enrolled in the LC. Each cluster has a budget for travel or to invite expert speakers. These research seminars force students to examine research questions very early in their academic life to develop a spirit of inquiry and the ability to apply knowledge to address issues and seek solutions (an application of inquiry based or problem-based learning). Students study their topic in a holistic fluid manner where it is connected to a place/community and part of life in the community. Topics focus on GCED and specific ESD themes. Example topics and output over the last 20+ years of sample LCs are provided. A culminating LC fair is held on the last day of the block where each LC staffs a booth to share their work with the entire SUA and outside community.

A second institution wide effort is SUA's involvement in the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment and Rating System (STARS). Over 350 institutions of higher education participate in the program, largely from the US and Canada, with some international involvement from some other countries. The STARS program is a holistic approach to document and assess sustainability efforts of one's campus community. Categories include academics, engagement, operations, planning and administration, and innovation and leadership. At SUA, this work is led by a university wide sustainability committee with representatives from faculty, students and staff who lead all activities, information gathering, and campus educational and promotion efforts. The paper will discuss the process of application and various community efforts and activities involved in this program. SUA originally engaged in the STARS program in 2017, but its rating expired in 2021 due to inability to continue the program during the pandemic. SUA just completed its most recent submission and was able to once again achieve silver status. The SUA community is focused and determined to achieve gold status on our next submission.

The final institution wide effort on sustainability is SUA's collaboration with external institutions. Last year SUA signed two Memorandum of Understandings (MOU) with outside organizations. The first was with the Soka Amazon Institute located in Manaus, Brazil, in the Amazon. The MOU provides for opportunities for faculty to visit the institute for research and to expand their understanding of sustainability, especially in a place where sustainability is a major part of everyday life including all city life and activities. SUA has initiated annual study tours for our students to visit the institute and learn about sustainability. SUA has also engaged the State University of Amazonas and the Federal University of Amazonas as part of the annual study tour, as well as looking for additional exchange opportunities during the year for students and faculty. MOUs between SUA and these two universities are being finalized. The second MOU SUA established was with Earth Charter International (ECI). There are three specific activities currently pursued in this MOU: ECI faculty provide courses on sustainability to our students in the Fall, certificate courses for selected faculty, staff and alumni in the Spring, and SUA sends an annual learning cluster to the ECI offices on the University of Peace campus in Costa Rica. A report of the first LC that visit ECI is given.

At SUA, ESD and GCED efforts are mutually reinforcing, and we attempt to focus on all levels of community: our campus, city, country, and global communities.

Edward M. Feasel became Soka University of America's second president in July 2020, after serving as one of its founding faculty members. Founded by Buddhist philosopher Daisaku Ikeda, SUA is a liberal arts institution dedicated to fostering global citizens. Since opening in 2001 in Aliso Viejo, California, SUA has promoted peace, human rights, and respect for the dignity of life, emphasizing the development of courage, compassion, and wisdom in its students. Since SUA's founding, Feasel has shaped the university at every level. As the first dean of students, he built the student affairs infrastructure. Later, as dean of faculty (2005-2017), he developed the Environmental Studies concentration, strengthened language instruction, and launched the Distinguished Visiting Scholars Program. His leadership as executive vice president and chief academic officer brought tangible growth: a new science building, additional residence halls, and a 30% expansion of students and faculty. He also oversaw the creation of the Life Sciences concentration. An economist by training, Feasel studies how societal values influence economic outcomes. His research focuses on regional economics, growth dynamics, development assistance, trade policy, and fiscal impacts. He's authored two books: *Japan's Aid: Lessons for Economic Growth, Development and Political Economy* and *Exports, Trade Policy and Economic Growth in Eras of Globalization*. Feasel holds a bachelor's in economics from Yale and a doctorate from UC Berkeley.

The UNITAR/UNESCO-initiative “Leaders in Higher Education Alliance and Programme – For Accelerating Sustainability Transformations” (LEAP-FAST)

Ebru Canan-Sokullu, UNITAR

Education for Sustainable Development in Teacher Training as a crosscutting task of higher education

Susanne Timm – Annette Scheunpflug

This presentation argues that education for sustainable development (ESD) as a cross-cutting theme in higher education can also promote democratic action if it addresses more clearly the challenges to civic engagement arising from the complexity of global and multi-layered relationships. Taking ESD into account in teacher training means not only teaching it in higher education but also training teachers to teach it. The presentation shows empirical results on both aspects for university teacher training.

The normative orientation of ESD aims to achieve social justice, take ecological sustainability into account, and ensure economic stability – in relation to each other. This is expressed in many thematic facets and concepts, in which different priorities are set. What all concepts have in common is the complexity of the issues involved and their relationship to justice for social coexistence on a global scale. Global learning shares this normative orientation, the educational objectives, and the characteristic of complexity with ESD. Above all, the aspect of global social justice closely links ESD with global learning for responsible global citizenship.

Research shows that dealing with the dynamics of change and the resulting complexity is challenging for teachers and teacher students, whether the issue is global, cultural or political (Clemens et al., 2019; Taube, 2023). However, teachers are considered to play a significant role in promoting sustainability and encouraging global learning (OECD & Asian Society, 2018; Bourn, 2016).

The presentation provides insights into empirical research on teachers’ beliefs about how to deal with the social complexity of global issues and the understanding of culture (Taube, 2022; Timm, 2021). The reason for the two presented studies is that orientations and professional beliefs are considered relevant predictors of teachers’ actions (Baumert & Kunter, 2006; Shulman, 2006). For the studies, 17 narrative interviews with experienced teachers involved in global learning and 32 group discussions with teacher students were conducted. The thematic focus of data collection was put on challenges teaching complex issues within the interviews and on dynamics in the global social context within the group discussions. The documentary analysis of the data provides an insight into the implicit knowledge of the interviewees that guides their actions and ultimately leads to the construction of multidimensional ideal types. The findings can be linked to the understanding and reflection on the complexity as part of ESD. They are discussed in terms of their relevance to current knowledge on teacher education with the aim of achieving a deeper commitment to teaching for dealing with complexity as considering social justice and sustainability and to guide how to teach ESD. Starting points for reshaping teacher education can be found in the results in that they reveal factors and conditions influencing the development of implicit knowledge toward social justice in different areas and at different stages of professional development.

So far, ESD in teacher education has mainly been implemented contingently as part of isolated subject studies or embedded in educational science studies. Sometimes, ESD serves as an optional addition to the degree. However, to meet the demands of the complex challenges of global citizenship, it is necessary to integrate ESD comprehensively into the degree programs. Referring to this cross-cutting area could also have the positive effect of making teacher training more coherent. Finally, this approach will disseminate ESD as means of fostering democratic citizenship across the faculties within higher education institutions due to the structure of teacher education. While it is based on subject-specific and interdisciplinary components, it will disseminate complexity orientated ESD to a variety of domains within higher education.

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Presentation of graphic recording

Eva Feuchter

The conference will be documented by Eva Feuchter's graphic recording. The presentation will give first insights into the results of her work during the three days of the event.

Eva Feuchter is a multidisciplinary illustrator and visual artist based in Leipzig, Germany. Her work is located at the intersection of art and design. She also runs the Graphic Recording business *Visual Witch*. Eva studied Visual Communication at the University of Art and Design BURG Halle and later went on to get a master's degree with a focus on writing and illustration from the University of Applied Sciences in Mainz. Her final project was awarded the Rheinland Pfalz Design Prize and published under the name *Şimdi heißt jetzt* at Slanted Publishers. Growing up in rural Bavaria as a highly sensitive person, she spent a lot of time on walks in the forest and found her joy in drawing, writing and reading. Recurring themes in her work are the subconscious, magic, nature and the feminine. She transfers her symbolic illustrations onto natural materials to create objects for modern rituals.

stream 1 – ESD, storytelling, and arts-based methods

Is Greening Pedagogy in Education the only way out? A Study of Select Indigenous and Climate Narratives for Sustainable Environmental Engagement

Gurpreet Kaur

As climate change continues to intensify, education plays a crucial role in fostering sustainability literacy and inspiring actionable change. Traditional climate pedagogy often focuses on scientific and technical aspects yet lacks interdisciplinary integration that connects ecological issues to broader societal, cultural, and ethical dimensions. This paper explores the transformative potential of storytelling, literature, and experiential learning in enhancing climate education. By weaving narrative-driven approaches into teaching, educators can evoke deeper emotional engagement, fostering a sense of interconnectedness between humans and nature. Literature, particularly climate fiction (cli-fi), has emerged as a powerful pedagogical tool, enabling students to experience ecological crises through storytelling while cultivating a sense of environmental responsibility.

The study examines how seminal texts such as Barbara Kingsolver's *Flight Behavior*, which explores climate disruption through the migration patterns of monarch butterflies, and Amitav Ghosh's *The Great Derangement*, which critiques the literary world's neglect of climate narratives, can enrich climate education. Additionally, Richard Powers' *The Overstory*, a novel emphasizing the profound interconnectedness between humans and trees, offers an emotionally resonant perspective on ecological consciousness. Short fiction also serves as an impactful medium, with works such as classic children's books including Shel Silverstein's *The Giving Tree*, Dr. Seuss's *The Lorax*, Julia Donaldson's *The Snail and the Whale*, and Emily Haworth-Booth's *The Last Tree*, presenting speculative environmental futures that take the young learners close to the nature and challenge them to rethink humanity's role in shaping the planet's fate. Many indigenous cultures have long regarded nature not as a resource to be exploited but as a living entity with intrinsic value. Rooted in Naga folklore, Easterine Kire's *Son of the Thundercloud*, explores themes of ecospirituality, human-nature interconnectedness, and climate-induced transformation. The integration of these texts into climate education provides learners with immersive storytelling experiences that bridge scientific understanding with ethical reflection.

The study is anchored in Environmental Humanities, Ecocriticism, and Pedagogical Theory for Sustainability Education, and draws from John Dewey's Experiential Learning Theory, advocating for narrative immersion, and community-engaged learning to translate climate literacy into action. Dewey's principles underscore the value of hands-on learning, where students actively participate in ecological storytelling, field explorations, and sustainability initiatives that reinforce cognitive and emotional engagement. By integrating cli-fi and indigenous narratives within these pedagogical structures, climate education moves beyond rote memorization, fostering a transformative learning experience that empowers students as environmental stewards. The research employs a mixed-methods approach, combining literature analysis, case studies of climate education programs, and surveys with educators and students to evaluate the effectiveness of interdisciplinary climate pedagogy. Findings indicate that narrative-driven learning fosters deeper environmental consciousness, making climate issues more relatable and engaging for students.

The significance of this study lies in its contribution to the evolving discourse on education for sustainable development (ESD). It underscores how by embedding cli-fi and narrative-driven methodologies into climate education, educators can cultivate a new generation of environmentally conscious citizens who recognize the urgency of ecological resilience and are empowered to shape a more sustainable future.

Dr. **Gurpreet Kaur** is an accomplished educationist, author, poet, and editor with over twenty years of teaching experience. She serves as an Assistant Professor of English and Head at Sri Guru Teg Bahadur Khalsa College, affiliated with Punjabi University, Patiala, Punjab, India. Dr. Kaur has authored 16 books and published 70 papers in national and international journals. She has presented at over 56

conferences and actively participates on editorial boards. She is actively contributing to sensitizing towards climate change and importance of moral ethics through her writings like, authored books, edited books, poems, blogs, collection of short stories, etc. Additionally, she is an award-winning social worker also.

The representation of environmental conflicts in contemporary German literature: an advocacy for environmental justice. The case of *Das Meer* (2018) by Wolfram Fleischhauer and *Der neunte Arm des Oktopus* (2020) by Dirk Rossmann

Nana Toumeni Julior Merlin

The debate surrounding the resolution of the ecological crisis is not new. In fact, the first movements fighting for environmental protection took place in the 19th century in America with books such as Rachel Carson's *Silent Spring*. However, the ecological crisis we experience today is only growing, provoking social and literary transformations. This is how contemporary German literature, and in particular contemporary German eco-thrillers, which emerged in this context, represents environmental conflicts between great powers and developing countries. These great powers in the midst of an ecological crisis, are abusively exploiting the natural resources of indigenous people. This gives rise to conflicts and violence between these two cultures. However, studies on this phenomenon in contemporary German literature have not yet been conducted. Whereas its study can help to understand the reasons for the lack of adequate measures to resolve the global ecological crisis as well as the conflicts affecting the entire world today and even suggest possible solutions to this effect.

Anyway, it is impossible to reach the global sustainable development's goals without peace. This study examines therefore how the environmental crisis represented in contemporary German eco-thrillers leads to environmental conflicts as well as the stakes of such representation in the era of the Anthropocene. To this end, it proceeds through a postcolonial eco-critical analysis of two contemporary German eco-thrillers published respectively in 2018 and 2020, namely *Das Meer* by Wolfram Fleischhauer and *Der neunte Arm des Oktopus* by Dirk Rossmann. That said, it is structured in five parts. The first part discusses the origin, evolution, and characteristics of eco-thrillers. The second part presents the environmental crisis in contemporary German eco-thrillers as a global phenomenon. The third part examines humans as the main cause of the environmental crisis in contemporary German eco-thrillers. The fourth part examines the different types of environmental conflicts represented in contemporary German eco-thrillers. The fifth part discusses violence as a consequence of environmental conflicts. The results of this research show that these eco-thrillers advocate for peace, environmental protection, education for sustainable development, and environmental justice. This research therefore suggests that these novels be included in programs for implementing education for sustainable development in higher education institutions because they portray very well the complex and intertwined challenges of the global polycrisis humanity is facing such as environmental crisis, conflicts, violence, injustice.

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Indigenous Practices and Creative Instruction: Enhancing Sustainability via Storytelling in Higher Education

Ravula Krishnaiah – Sakshi

Education for Sustainable Development (ESD) must transcend conventional pedagogies and engage students in culturally grounded, emotionally resonant, and transformative activities considering the rapidly worsening ecological deterioration and societal fragmentation. The effectiveness of using Indigenous stories and creative teaching methods to instill sustainability principles and competencies in Indian Higher Education Institutions (HEIs) is examined in this study. This study explores how storytelling and innovative pedagogies, particularly those drawn from indigenous traditions, might improve student engagement and promote in-depth, values-based sustainability learning. It is based on multimodal and decolonial educational frameworks. India is home to a vast collection of indigenous knowledge systems and oral cultures that have long stressed interdependence, peaceful coexistence with nature, and moral obligations to the environment and society. However, these cultural narratives are frequently marginalized in favor of technocratic or Eurocentric approaches to sustainability education in mainstream higher education curricula. Through folk tales, rituals, myths, songs, and local ecological knowledge, this study retrieves the potential of Indigenous storytelling traditions as pedagogical tools to make sustainability education an increasingly place-based, inclusive, and meaningful discipline. 100 undergraduate and post-graduate students enrolled in environmental studies, teacher education, and liberal arts programs at five Indian universities participated in this study, which used a survey-based research approach to gather quantitative and qualitative data. Following exposure to storytelling and arts-integrated teaching sessions centered on climate change, biodiversity, water justice, and social equality, the survey assessed students' levels of engagement, cultural resonance, emotional reaction, and development of sustainability competencies. Cultural identification and environmental belonging, analytical thinking and systems thinking, empathy and ethical reasoning, and action competency for sustainability are the primary constructs that this study measures. According to preliminary research, Indigenous tales significantly improve student

engagement, critical thinking, and long-term memory of sustainability principles. This is particularly true when paired with artistic modalities, including theatre, visual arts, and interactive media. Students expressed a stronger sense of agency to effect change, a more profound comprehension of local-global connections, and a closer personal connection to sustainability issues. The findings also suggest that learner tiredness and alienation, which are frequently seen in abstract or data-driven sustainability instruction, can be lessened by decolonial and arts-based pedagogies. This study supports the expanding area of narrative and arts-based pedagogies in ESD and emphasizes the importance of cultural grounding, emotional intelligence, and creativity in transformative education. Additionally, it aligns with India's National Education Policy (NEP) 2020, which strongly emphasizes experiential, multidisciplinary, and holistic learning that ties pupils to their natural and cultural heritage. Additionally, this study contends that incorporating indigenous and creative approaches into university courses is a decolonial and epistemic necessity rather than just a pedagogical decision. It offers a global approach that honors various ways of knowing and being and challenges prevailing paradigms that link sustainability knowledge only with scientific rationalism. This work has both theoretical and practical ramifications. It reaffirms how important aesthetic education, narrative enquiry, and cultural epistemologies are to furthering ESD objectives. It offers a framework for curriculum developers, instructors, and legislators to integrate student-centered, culturally grounded methods into sustainability projects in higher education. In Indian higher education, Indigenous tales and innovative teaching serve as potent catalysts for the change of sustainability. Such pedagogies cultivate knowledgeable minds, kind hearts, and active hands qualities critically needed in today's sustainability leaders—by elevating different voices, encouraging strong linkages to location and culture and stimulating the imagination. As a key tactic for accomplishing the UN Sustainable Development Goals (SDGs), especially SDG 4.7, which calls for education that fosters sustainable lifestyles, global citizenship, and cultural diversity, this study promotes the institutionalization of storytelling and arts-based learning within Indian HEIs.

Dr. Ravula Krishnaiah is currently serving as an Assistant Professor in the Department of Education and Education Technology, School of Social Sciences, University of Hyderabad, Telangana. With a Ph.D. in Education from Osmania University, his academic journey is rooted in a strong foundation of interdisciplinary studies, including Political Science, Philosophy, and Education. His research interests span across Constructivist Pedagogy, Philosophy and Sociology of Education, Curriculum Studies, Education for Sustainable Development, Inclusive Education and Yoga Education. Dr. Krishnaiah has successfully guided two scholars to the completion of their Ph.D. degrees. He published extensively in UGC CARE-listed journals and authored several academic books in English and Telugu. He has contributed significantly as a coordinator and resource person for NEP 2020 Orientation and Sensitization Programmes organized by MMTTC, UGC, and other national bodies. In addition to his academic contributions, he has served in administrative roles, including as Hostel Warden and Coordinator of Unnat Bharat Abhiyan at the University of Hyderabad. He has also organized and participated in numerous national seminars, workshops, and conferences focusing on educational policy, rural development, and teacher education. His professional strengths include strong communication skills, dedication to academic excellence, and the ability to build a collaborative work environment. He is committed to advancing inclusive and quality education aligned with national educational goals.

Narratives of agency. Working with the mountains. A workshop of restorying and restoring hope

Senan Gardiner – Tamara Mitrafanenko

In a time where the effects of multiple wicked problems can be felt simultaneously, from heat domes to housing crises, sustainability students often feel like they are about to enter a world of mountain climbing, unsure if they brought proper equipment, if they've trained enough or if they have the mental resilience to keep climbing. In this interactive workshop, I will explore narratives of change agents who have demonstrated sustainability competence and compare it to narratives of higher education students who have just engaged in a seminar working with sustainability problems of stakeholders from actual mountains, the Carpathians. In honor of the change agent Joanna Macy, whose work has inspired sustainability activists since the 1960s, the workshop will be framed by an active hope activity (Macy & Johnstone 2022). This will be followed by a research input showing results of "restorying" (Scott 2020) both interviews of change agents and learning journals of this year's transdisciplinary class project ProBioTIC (see below). Then participants will be given the tools to "restory" their own narratives in pairs and invited to share their own path over the mountains.

Objectives: In this workshop participants will engage in a practice of active hope, explore narrative analysis, structure and specifically learn the process of restorying as a tool to connect with one's own story of self and what it can teach us for our own storytelling (Reidy 2020).

Background and methodology: The ProBioTIC project stands for PROMoting BIOdiversity through Transdisciplinary learning Interventions in the Carpathian region. The project emerged from collaboration with project partners involved across the Carpathian Biodiversity Framework (CBF). These partners are the Leuphana University Lüneburg, Jagiellonian University Krakow, the Hungarian Centre for Ecological Research and external consultant Dr Tamara Mitrafanenko. Part of this project involved the development of a seminar in both the Leuphana and Jagiellonian universities investigating the biodiversity issues of the Carpathians and developing a transdisciplinary solution oriented learning intervention in response (Lang et al. 2012). This involved working with stakeholders to cocreate a research question and answer it through a specific learning intervention. Seven student groups then delivered their learning interventions over the summer of 2025.

The 18 Leuphana students were asked throughout this process to reflect on and record the development of their agency as transdisciplinary researchers through learning journals. These learning journals, together with 11 interviews of sustainability change agents are being analyzed for their stories and "restored".

Key Findings: Current results include stories of self that show aspects of reclaiming agency, reframing, taking initiative and active hope. These results will be presented in the workshop and serve as a springboard for investigating our own stories of self (Ganz et al. 2023).

Significance of results and Workshop: Through use of this "restorying" framework and resulting themes, participants will be asked to share their narratives with one another, and we will map these stories to a narrative framework (Labov 1972), connecting to our calls to action, epiphanies and follow-up responses.

Through using narrative analysis (Cortazzi 1993, Riessmann 1993, Lieblich et al. 1998), we will work together to see how the stories we tell ourselves about our motivations to climb these difficult mountains, can be developed and "restored" – a process of reflection, relation and respect.

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Education for sustainable development in Greenland: the significance of cultural values

Eva Ritter

Education for sustainable development is a global concern. However, the concept is based on Western values of the Enlightenment and the Romantic era. These values are not equally accepted by all countries or cultures. The thesis of the present study is therefore that cultural aspects play a crucial role in the implementation of education for sustainable development. This should be considered when educators from a Western background work in learning environments of a different cultural context.

As an example, the significance of values, traditions and worldviews of the Arctic Indigenous culture in Greenland were examined. The methods applied in the study were literature studies and semi-structured expert interviews. Five persons were interviewed, three Greenlanders and two Danes. All of them work in the field of education or in the context of cultural history in Greenland. The topics elaborated by the interviews were human-nature-relationships, traditional forms of teaching and communication and the understanding of sustainability in Greenland.

It could be shown that certain cultural values can support the Western approach to education for sustainable development in Greenland. At the same time, other cultural traditions might hinder the communication process if not considered in the work of education and sustainability.

The interviewees expressed that the human-nature-relationship in Greenland differs from a Western view. This also affects the understanding of sustainability. In the Inuit culture, nature is not considered as something that can be mastered by human beings. Rather, a profound respect of the forces in nature still exists in the modern Greenlandic society, and natural changes are mostly met by adaptation. From the global sustainability discourse, many Greenlanders feel geographically, ethically and morally decoupled.

For the work with education for sustainable development, the Inuit traditions of storytelling and of learning by observation and active participation can be helpful. Using those methods in the context of education for sustainable development will be in line with the didactic principles of the educational

concept. Additionally, the use of these methods can help communicate Indigenous traditions to the younger generations, thereby contributing to the aim of cultural sustainability.

Cultural manners such as the lack of a discussion culture should be considered in educational work in Greenland to avoid misunderstanding. This is especially important for actors from Western cultures. It is also vital to be aware of the risk of neocolonialism through Western knowledge. Different world views and different sources of knowledge should be met with openness, exchanged and learned from. If this is considered in the work with education for sustainable development, cultural values can contribute to the diversity of perspectives that is needed to support the transformation process of society.

Dr. **Eva Ritter** is a trained geo-ecologist (Ph.D.) and obtained an additional M.A. in Education and Sustainability with focus on cultural values and oral storytelling in Education for Sustainable Development (ESD) in Greenland. Dr. Eva Ritter has worked as an Associate Professor at universities in Denmark, Iceland and England. Her research comprises processes in forest ecosystems, cultural connections between humans and nature and more recently storytelling in ESD. She now works as advisor, educator and freelance researcher in Education and Sustainability with her Institute Nordic Perspectives. In 2023, she was honored with the National Award ESD2030 by the German UNESCO commission and the Federal Ministry of Education and Research for excellence work in transformative education. This year, she received the Sustainability Award of the country Schleswig-Holstein.

Musik. Bildung. Nachhaltigkeit.

Julia Peters – Philipp Ahner

“We are surrounded by data, but data alone doesn’t move people. Art is what makes us feel the urgency.” (Beatie Wolfe)

Die Herausforderungen, denen sich Musikhochschulen national wie international gegenübersehen, sind komplex: Transformationsprozesse im Bereich musikbezogener Arbeitsfelder und damit einhergehende Veränderungen von Kompetenzanforderungen prägen Studium und Lehre im 21. Jahrhundert und erfordern Reflexion und Gestaltung von Curricula und Studienstrukturen. Denn Musiker:innen in Orchestern, auf Bühnen, in Schulen, in Musikschulen sowie auch und vor allem auch in hybriden Arbeitsfeldern sind gefordert, mit komplexen Herausforderungen umzugehen, Veränderung in Technik und Gesellschaft aufzugreifen und Handlungspraxen schnell zu adaptieren.

Im Kontext von Hochschulbildung in musikalisch künstlerischen Bereichen wird vor diesem Hintergrund international diskutiert, wie künstlerische Exzellenz und gesellschaftliche Verantwortung als korrespondierende Elemente musikalischen Handelns gedacht werden können (Gaunt et al., 2021), denn „Musik entsteht nicht allein im Werk oder in der technischen Perfektion der Aufführung, sondern im gemeinsamen Tun, in Interaktionen, die soziale Beziehungen und Bedeutungen hervorbringen. Exzellenz kann hier verstanden werden als die Fähigkeit, musikalische und soziale Prozesse gleichermaßen kompetent zu gestalten und in konkrete Situationen hinein zu übersetzen“ (Petri-Preis, 2025 in Druck). Artistic Citizenship (Elliot et al.; p. 7, 2016) ist in diesem Zusammenhang international ein viel diskutiertes Konzept und erscheint anschlussfähig an (hochschulische) Bildung, die nachhaltiges Lernen und Handeln fokussiert.

In diesem Beitrag beleuchten wir daher zunächst, wie Bildung für nachhaltige Entwicklung (BNE) in musikpraktischer Hochschulbildung aufgegriffen und gestaltet wird. Daran anschließend wird gefragt, inwiefern Artistic Citizenship die mit BNE verknüpften Ziele und Kompetenzen spiegelt und inwiefern Handeln in der künstlerischen Praxis zur Erreichung von Nachhaltigkeit beitragen kann. Die Stärkung insbesondere sozio-emotionaler Kompetenzen rückt ins Blickfeld, wenn es um Fragen der Gestaltung zukunftsorientierter Curricula geht.

Im Sinne einer Multiple-Case-Study werden dafür exemplarisch internationale, insbesondere EU-geförderte Projekte der Association Européenne des Conservatoires, Académies de Musique et

Musikhochschulen (AEC) wie das Projekt „Artists as Makers in Society“ (ARTEMIS) und „FAST45“ beleuchtet, analysiert und reflektiert. Dabei werden insbesondere zwei zentrale Handlungsfelder fokussiert: die Entwicklung innovativer Curricula einschließlich kreativer und experimenteller Lernräume sowie Bedeutungen von Digitalisierung in Lernprozessen.

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Philipp Ahner (Dr. phil.) is Vice President and Professor of Music Education in the Context of digital Media at the Landeszentrum MUSIK–DESIGN–PERFORMANCE of University of Music Trossingen. He is a recognized expert in national and international networks, both for university development and leadership and for music education and music didactics in science and teaching practice. His research focuses on music didactics with digital technologies in adolescence as well as in teacher training and higher music education. Previously, he was Professor for Music Didactics at the Detmold University of

Music, lecturer at the seminar for teacher training and didactics, as well as head of department and teacher for music, business and history at a vocational school center and employee at the National Theatre Mannheim.

Getting 'Radical' – Tackling the Cultural Roots of the Modern Multicrisis through Decolonial and Relational Learning in/beyond ESD

Timo Holthoff

Objective and significance

The workshop is based on the assumption that underneath the outer manifestations of the modern multicrisis, commonly addressed by ESD on a symptomatic and structural level, lies a cultural foundation that perpetuates the systemic unsustainability of modernity. The workshop invites to explore these ontoepistemological patterns of modernity (the deeper roots) and with it the internalized 'harmful modes of modern existence' (Andreotti et al. 2020) which constitute our inner systems and in many ways impede the transformative potential of ESD. The workshop advocates for more 'radical' ESD, especially in the sense of reconnecting with aspects of life on earth that the modern 'culture of separation' (Eisenstein 2013) has alienated us from -within us, between us and around us. With some immersions into decolonial and relational learning approaches the workshop gently invites for experiences of disrupting and recalibrating our cognitive, affective and relational dispositions as a practice of deep transformative learning. Together we strengthen our capacity to give palliative care to a dying system while creating space for something different - and potentially more regenerative – to emerge in higher education for ESD and beyond.

Methodology

The workshop features short impulses that rather come in the shape of storytelling than lecturing. It will be highly immersive and experimental, practically showcasing some of the decolonial approaches to learning that it advocates for – including embodied, relational and affective elements that disrupt the dominant modes of being, knowing and learning in higher education. Based on the impulses and experiences, the workshop creates a space for collective reflection and resonance.

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Timo Holthoff works at the Leibniz School of Education, University of Hannover, where he coordinates the 'Teaching Change' project that fosters ESD as a cross-cutting issue in teacher training and the

‘Teaching Change Community’ project that builds an ecosystem network of researchers, practitioners and stakeholders of ESD around the region of Hannover. With a long background in working for (inter)national NGO networks in Global Citizenship Education and ESD, he also is an activist consultant, facilitator, speaker and writer on transformative and decolonial (un)learning for radical cultural change. As an associate of ‘Schule im Aufbruch’, he accompanies schools in the process of Whole-School-Transformation for ESD.

Making Sense of Generative AI supported Sensemaking for Education for Sustainable Development

Christian Scheiner

The rapid advancement of generative artificial intelligence (AI) poses the potential for significant transformation across industries, organizations, and personal lives, yet it remains unclear whether these developments represent currently an evolutionary or revolutionary progress. This study investigates the effect of generative AI on sensemaking for sustainable development through a longitudinal panel study employing a mixed-method approach in which participants conducted gen AI supported sensemaking on three social challenges.

Motivation and research question: Artificial intelligence, particularly since the deep learning breakthroughs of the early 2010s, has reshaped industries and innovation practices. The accessibility of generative AI for a broader public has paved the way for its overwhelming success as regular users were finally able to understand its benefits for their professional and personal tasks at first hand. Given its rise and potential, generative AI is generally to be expected to cause significant or disruptive change in industries, organizations, and our daily life. At the same time, the question still must be answered, whether an evolutionary or revolutionary advancement has yet been occurred.

This study addresses this question and examines the impact of generative AI on sensemaking for sustainable development. Sensemaking is the ability to detect the unknown, to replace it with a profound understanding, and to share this understanding with others. Sensemaking is a “process in which individuals develop cognitive maps” (Ring & Rand, 1989, p. 342). It includes “the standards and rules for perceiving, interpreting, believing, and acting that are typically used in a given structural setting” (Sackmann, 1991, p. 33).

Methods: For the purpose of this study a longitudinal panel study with a mixed-method design was chosen, in which participants conducted AI supported sensemaking on three social innovations: Fighting poverty, food security, and water security. All participants were trained in sensemaking in advance and were familiar with its requirements, procedure and tools. Participants were not trained in the usage of generative AI. Data collection occurred through online questionnaires administered at strategic intervals. Participants were, furthermore, asked to submit their prompts, generative AI output as well as a critical reflection of those results in light to their overall sensemaking activities. Based on their sensemaking, participants should also develop and submit a solution for each social issue.

Findings: Data from 96 participants were included in the analysis. Each participant spent an average of 3 hours per week on sensemaking related to social issues. The study participants are almost evenly distributed between men and women. Having conducted sensemaking, a significant growth in the understanding of specific social issues over time was observed. Moreover, participants developed a more active role in their social interactions (sensegiving) concerning the social issues (measured with the opinion leadership scale (Childers, 1986) in social interactions on fighting poverty, food security, security and social innovation in general over time. In addition, their trust (measured with the trust scale (Taylor, 1994)) in generative AI as well as the perceived job relevance (measured with job relevance scale (Venkatesh & Bala, 2008)) of generative AI increased significantly over time. We additionally conducted a sentiment analysis environment to evaluate individual reflections on generative AI in sensemaking. The analysis reveals that LLMs are initially perceived somewhat

positively, with this perception becoming increasingly favorable over time. Nonetheless, participants acknowledged the limitations of generative AI, both in general and specifically for sensemaking.

Contribution: This research contributes to education for sustainable development for several reasons. First, this study contributes to a broader understanding of the value of generative AI for creative problem-solving in an ED I context with a mixed-method approach. The combination of quantitative with qualitative data offers valuable insights for researchers and practitioners alike. Second, with its longitudinal research design this study offers new insights into changes over time and important developmental trends. Third, sensemaking has been predominantly studied with qualitative research or case study design. Using a quantitative approach opens new avenues for future investigations in entrepreneurship, allowing for a critical reflection on established constructs, e.g., creative process engagement (Zhang & Bartol, 2010) as a proxy for sensemaking or opinion leadership (Childers, 1986) as a proxy for sensegiving engagement. Fourth, applying generative AI for education for sustainable development adds a promising instrument to the existing toolkit. Its usage depends however on a balanced and considered approach. The results of this study can contribute to a more sophisticated implementation. Fifth, the design of this study and its results were already used to train teachers in Schleswig-Holstein in collaboration with the State Commissioner for Political Education Schleswig-Holstein.

Christian Scheiner holds the Chair of Entrepreneurship and is Director of the Institute for Entrepreneurship and Business Development at the University of Lübeck.

Vestimentary Sustainability in Higher Education: Creative and Participatory Teaching Practices for Transformative Learning

Lesley-Ann Baldwin

WELTWEIT LANDET JEDE SEKUNDE EINE LKW-LADUNG TEXTILIEN AUF DEPONIEREN ODER WIRD VERBRANNT.

(Translation: EVERY SECOND, A TRUCKLOAD OF TEXTILES IS EITHER LANDFILLED OR INCINERATED.:

Greenpeace (Hg.) (2022): Fast Fashion muss aufhören. In: Greenpeace (Hg.) (2022): GPN 03/22.

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The fashion and textile industry accounts for approximately 10% of global greenhouse gas emissions, making it a major contributor to the climate crisis (cf. World Economic Forum: (2021): Net-Zero Challenge: The supply chain opportunity, Cologny/Geneva: <https://www3.weforum.org/docs/>). According to Greenpeace, the average person in Germany buys around 60 new garments per year (cf. Greenpeace (Hg.) (2017): Konsumkollaps durch Fast Fashion, Hamburg. P. 2.). The ongoing warming of the planet highlights the urgent need to promote sustainable solutions in this sector. Throughout the textile value chain, natural resources as well as human and societal structures are heavily exploited. The fashion and textile industry faces the pressing challenge of becoming more sustainable. Higher education plays a key role in educating professionals and consumers who can contribute to the transformation of this sector. This presentation introduces innovative teaching concepts developed at Osnabrück University that link Education for Sustainable Development (ESD) with vestimentary sustainability.

As part of my doctoral research and teaching in the subject area of Textile Design at Osnabrück University, I develop and test an inter- and transdisciplinary ESD curriculum focused on vestimentary sustainability. The aim is to foster key competencies such as systems thinking, ethical reflection, design competence, and transformative action in higher education. The teaching for-mats and projects developed in this context combine academic analysis with artistic practice, individual reflection with societal engagement.

In my presentation, I will showcase selected teaching formats that employ creative and participatory methods to empower students to engage with sustainability, (fashion) consumption, and social justice. For example, in the “Wardrobe Project,” students systematically analyze their own clothing inventories and create personal statistics on need, use, and potential excess. They reflect on their individual clothing styles to recognize impulse purchases, question consumption patterns, and develop a conscious, functional, resource-efficient wardrobe. In the seminar “ESD in the Context of Social Media,” students design informational posts and reels that raise awareness about injustices in the fashion industry and promote sustainable alternatives. They also critically reflect on their own social media use and examine the roles of influencers and so-called “sinfluencers” within sustainable education processes.

At the heart of my presentation are two exemplary projects: the teaching-based clothing rental *Fairo Moda* and the initiative *Better Fashion Osnabrück*. Both projects link ESD with innovative approaches to fashion and sustainability and foster local, interdisciplinary, and transdisciplinary engagement within the university context.

Fairo Moda is a university-based clothing rental system that applies the concept of the sharing economy to fashion consumption. Regularly integrated into my teaching, it functions as a hands-on learning space for sustainable consumption practices. It enables students to connect theoretical concepts with experiential learning, critically reflect on consumption behavior, and creatively explore fashion. Students and staff at Osnabrück University can borrow clothing through a system modeled on a library.

As part of the transdisciplinary *Better Fashion Osnabrück* teaching project, students first developed the *Better Fashion Guide*, which profiles local actors in sustainable fashion and provides background information on fast fashion, greenwashing, and label literacy. In a follow-up semi-nar, students created the *Better Fashion Walk*. The project began with a study trip to Berlin, including participation in a *Green Fashion Tour*. Students were then tasked with designing and leading a comparable sustainability-focused city walk in Osnabrück. The tour featured interactive stations and educational inputs, incorporating second-hand shops and concept stores. The selection of stops and themes was based on prior research and documentation from the *Better Fashion Guide*.

These teaching formats demonstrate how higher education can become an effective site of transformative learning. Through storytelling, inter- and transdisciplinary perspectives, and reflective creative practices, sustainability is not only taught theoretically but experienced as lived practice. Students actively engage with questions of consumption, social justice, and their own agency. In the spirit of Education for Sustainable Development, these concepts contribute to the development of critically reflective and action-competent individuals who are willing to take responsibility in a complex world.

Lesley-Ann Baldwin is a doctoral candidate and research associate in Textile Studies at the University of Osnabrück. Her PhD project, “Implementing Vestimentary Sustainability in Higher Education: Developing an Inter- and Transdisciplinary ESD Curriculum,” explores innovative approaches to integrating Education for Sustainable Development into university teaching. Her research and teaching focus on vestimentary sustainability, art reception with children and young people, and broader dimensions of ESD. She is actively involved in the “Mode-Textil” network, working in the sustainability task force, and she founded the university didactic clothing rental initiative *Fairo Moda*. Through her work, she aims to connect research, pedagogy, and practice to foster sustainable thinking and action in education and society.

use-less Milltour. Finding Regional Solutions through International Exchange. A Journey of Creative and Sustainable Education through Scotland and Lower Saxony merging Students and Academics with Regional Experts

The “Milltour” project is based on a longstanding collaboration between the use-less Centre for Sustainable Strategies at the University of Applied Sciences and Arts Hannover and its Scottish partner institutions (Robert Gordon University Aberdeen, Heriot-Watt University Galashiels).

Its goal was to comparatively explore the potential of regional wool — a largely underutilised resource with high potential for future-oriented textile production — in Germany and Scotland. By visiting a wide range of project-based practice partners it was aimed to strategically combine the universities’ research networks to enable supplementary bilateral knowledge transfer.

The collaboration, in form of a reciprocal exchange, started in September 2023 with a journey through Scotland and continued until spring 2024 with a return visit to Lower Saxony. Each Milltour identified the potentials of sustainable textile production and regional economic cycles through an interdisciplinary group consisting of lecturers, students and various business representatives who had the privilege of experiencing production processes firsthand for critical examination. The range of practice partners extended far beyond the fashion/textile context including regional SMEs and agricultural enterprises working with wool as a commodity. As such, the Milltour represents a unique cooperation characterized by its transnational, intercultural and cross-sectoral nature.

The innovative focus of the project lies in a sustainable connection between research and practice: where a lack of research infrastructure had previously isolated small textile businesses, an active network has emerged. Where academic expertise was lacking, external experts could be brought in, and the infrastructure of regional enterprises was used to realize prototypes for university projects in the field of fashion, product and interior design. Building on the network developed through the Milltour, student-driven projects continue to emerge around regional wool, offering technically sound product approaches that address design, manufacturing, wearability and machine implementation. In this way, previously overlooked wool is transformed into sustainable value creation, unlocking economic potential.

The initiative between the University of Applied Sciences and Arts Hannover and its partner universities continues to foster international cooperation, bringing together the interests of agriculture, design, craftsmanship and industry. The project’s reach extends significantly beyond its original scope: a nationwide exhibition series with a producer of regional wool products is in planning, as well as participation in an international ECAS forum in Scotland in October 2025.

From an economic perspective, the Milltour makes a forward-looking contribution: by systematically re-evaluating the use of regional wool resources, new production potentials are generated, supporting the re-localization of textile value creation back to Germany and initiating long-term economic growth.

The presentation will cover the project’s conceptual framework, the development and interaction of the associated research network, concrete project outcomes and sustainable developments within the partner universities beyond the project’s duration.

Triggered by the punk movement **Martina Glomb** turned her passion for fashion, craft and DIY into a profession. She became a couture tailor and worked as a designer for Vivienne Westwood in London and Italy, for more than a decade. She is now a professor for fashion design at the Hochschule Hannover, Germany. She specializes in design methods with focus on slow fashion and sustainability in teaching, research and transfer. As founder of the USE-LESS Centre for Sustainable Strategies she has initiated various interdisciplinary and international projects and exhibitions with universities and practice partners, aiming to merge science, education and design. For her work she received the science award for Lower Saxony in 2023.

Jule Eidam is a research associate and founding member of the USE–LESS Centre where she focuses on sustainable materials and design strategies that link research, teaching, and public engagement. Her work emphasizes the integration of sustainability into design education and practice across fashion, product and interior design. She contributes to applied research and collaborative projects with students and industry partners that promote innovative approaches to sustainable design. As part of the innovation lab USE–LESS, she supports the creation of visible spaces for experimentation and knowledge transfer. Her work aims to foster a culture of responsibility in design education and to strengthen the connection between academic research and societal transformation.

Successful Integration of Transfer-oriented Higher Education for Sustainable Development into Academic Teaching - Case studies of interdisciplinary and Arts Education for Sustainability: Future.Now-Festival

Katja Kettner – Heike Scharpff – Heike Molitor

Future-oriented higher education (HE) requires structural changes at universities, as well as teaching concepts that enable students to actively shape and overcome the societal challenges of sustainable development. Higher education for sustainable development (HESD) provides an important foundation, both at the curriculum level and as an orientation for academic teaching. This paper shows how HESD can be integrated into individual modules with a high degree of transfer complexity. The case study of a future festival (Zukunft.Jetzt!/future.now!-Festival) shows how didactic and methodological features of HESD can be applied in a transdisciplinary teaching context. The perspectives of students, lecturers and external partners are relevant to develop ideas for future teaching concepts with a high proportion of transfer. The result is a successful implementation from the perspective of the students. However, the external partners still saw a need for better communication.

This Presentation elaborates on the case study of an innovative teaching project in the context of higher education for sustainable development (HESD). It was carried out in public space as part of a future festival which aimed at raising awareness of sustainability and climate change.

The Government-funded program “Innovative University” aims at promoting the transfer into the regions. In the German federal state of Brandenburg, the joint project “InNoWest-Einfach machen” is funded by three state universities (Eberswalde University for Sustainable Development, Potsdam University of Applied Sciences, Brandenburg University of Applied Sciences). These universities are pooling their expertise to meet the societal, structural, technical and ecological challenges in the region of north-west Brandenburg and to develop solutions in cooperation with local stakeholders. The innovation team “ESD and Participation” developed teaching formats for students, who came into contact and exchange with external partners. In the following, we present two case studies that were carried out with bachelor students at HNEE during the summer term (2024/2025). It consisted in participating in the “Zukunft.Jetzt!-Festival”.

Case studies of interdisciplinary and Arts Education for Sustainability: transfer-oriented educational Formats at the Zukunft.Jetzt!-Festival of the Kanaltheater

As part of the Bürgerstiftung Barnim/Uckermark the Kanaltheater is committed to cultural networking and Community-Arts. The Theatre takes up topics relevant to society and works on them together with citizens, migrants, experts of everyday life and performers engaged in civil society and organizations supporting democratic diversity. The Kanaltheater promotes dialogue on current issues such as climate change, flight and migration, gentrification, remembrance culture, handling conspiracy theories and hate speech. The ensemble of the Kanaltheater consists of volunteers and a professional artistic team of writers, directors, musicians, set, costume designers, as well as a crew for stage and technology. It has been doing theatre work in Eberswalde since 2013.

In the summer of 2024, an artistic future festival (Zukunft.Jetzt!-Festival) was realized in collaboration with students from HNEE in Eberswalde. In collaboration with a member of the Kanaltheater, bachelor students developed six learning stations on the field of sustainability that provided ideas for social engagement in their city to pupils in grades 7-9. The concept of the handprint provided the foundation for devising these stations. The handprint helps to show what each person can actively contribute to sustainable development (Reif & Heitfeld, 2015).

In the summer of 2025, members of the artistic team of Kanaltheater gave impulses on the topic of performative urban space interventions as formats for communicating sustainability in the ESD seminar. The theatre team introduced the students in how to work in public space, aspects of participation, dialogue orientation and artistic friction through aesthetic exaggeration. The students developed two performances, one for the market square in the town of Eberswalde and another for the family day on the festival site. Both performances combined impulses and ideas for sustainable action with artistic methods.

Conclusions

The transfer in academic teaching can succeed if the structural framework is in place. At the level of individual modules, the implementation of transfer- oriented teaching-learning processes is feasible despite the increased organizational effort. At the module level, HESD can easily be integrated into the curricula bottom up. The case study represents a building block in the spiral-curricular implementation of HESD. The HNEE's Teaching Mission Statement explicitly emphasizes transfer-oriented teaching formats: At the implementation level, further support structures are needed to enable systematic anchoring in a study program. In addition, further research is needed into the stakeholders in practice with regard to the conditions for successful cooperation, to be able to work together even more closely to meet their needs and thus create a win-win situation for all.

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Katja Kettner works as a dramaturge, author and curator. She writes blogs and gives lectures. She collaborates with international artists and institutions such as *Riki von Falken*, *IETM* and *The FURIES*. She is the artistic co-director of *KANALTHEATER*.

Heike Scharpff works as a freelance director and coach for artists in transition. Her special interest lies in research projects on current social issues and community projects. She is the artistic co-director of *KANALTHEATER*.

Heike Molitor works as a professor of environmental education and education for sustainable development at Eberswalde University of Sustainable Development. Her research focuses on ESD, transdisciplinarity, transfer, biosphere reserves and nature experience. She is a member of various advisory boards, such as the German National Committee of the Man and the Biosphere Programme.

Digging for Diversity – Exploring the concepts of regeneration and diversity in the context of sustainability through interdisciplinary and arts-based teaching

Julia Wiethüchter

Developing an integrative understanding of sustainability and empowering for action are core competencies of ESD. As part of the teaching experiment "Digging for Diversity", we explored the concepts of diversity and regeneration in the context of sustainability trying out innovative teaching practices as well as arts-based interventions. Besides planning the teaching experiment, we invested considerable time in conceptualizing the course, agreeing on our pedagogical approach, which was guided by the principles of Engaged Pedagogy. Inspired by hooks (1994), we resolved to not fulfil our

role as teachers in a dictatorial, authoritarian, or unidirectional manner. Instead of focusing on imparting knowledge to students, we were much more concerned with problem-formulating education (cf. Freire 2014), exploring a topic together with the students and growing from it. We did not want to shy away from showing ourselves as vulnerable and not omniscient. We also took hooks' reference to Thich Nhat Hanh seriously (cf. 1994, 14). His perspective on teachers as healers and his emphasis on wholeness and the connection between mind, body, and spirit influenced our conception of the seminar. Finally, following Freire (2014), we aimed to establish a practical connection and facilitate critical thinking about the world in which we and the students are embedded. In addition to creating a less hierarchical and embodied learning space, our approach was essentially inter- and transdisciplinary. The assumption was that, particularly in the pursuit of just social-ecological transformation processes, systemic knowledge taught and learned within one discipline must be placed in interdisciplinary contexts to address the challenges facing societies today.

The seminar was taught twice in the summer semesters of 2024 and 2025. The course was structured around three phases: "digging," "sowing," and "harvesting & composting." These three blocks were based on the overarching ESD core competencies of understanding, evaluating, changing, and acting (cf. Bellina et al. 2020, 33). In the first phase, students from various disciplines explored their own disciplinary mindsets by reflecting on their fields of study with regard to the ways of learning and researching and by learning the principles of inter- and transdisciplinary research. The second block offered interdisciplinary inputs and creative exploration through arts-based methodologies and deep ecology exercises. In multiple sessions, researchers from two disciplines each presented their approaches to diversity (first year), regeneration (second year) and sustainability and engaged in disciplinary dialogue. The disciplines were ethnology, cultural studies, psychology, communication science, landscape ecology, microbiology, plural economics, economic informatics, educational science, political science, and peace and conflict studies. In other sessions, the students further reflected on the seminars' topics through artistic self-reflection and deep ecology practices. In the second iteration of the seminar, an artist was involved to guide the arts-based teachings. The deep ecology practices included the "deep time walk" and a "council of all beings". In phase three, the students reaped the fruits of their labor by presenting the course's findings in different projects involving a non-academic audience. During the course, a wide range of empirical material was collected and subsequently evaluated.

Overall, it became apparent that the teaching experiment enabled a deeper engagement with sustainability. The interdisciplinary formats allowed the students to critically reflect on the knowledge they gain through their studies. The input from other disciplines promoted problem-solving competencies regarding the social-ecological crisis. From a teaching perspective it was sufficient to set the topic of the various disciplinary presentations to generate inputs that were relevant to the aims of the course. The creative exploration and artistic exercises allowed an emotional connection with aspects of sustainability in addition to the cognitive learning experience. Overall, the students' statements suggest that the acquisition of core competencies for sustainable development may have been promoted by the structure and course of the seminar. However, this needs to be verified in a more rigorous empirical study.

The success of inter- and transdisciplinary teaching formats requires a special pedagogical attitude as well as time and motivational resources on the part of teachers and students. However, the experiences from the seminar show that these teaching innovations can be particularly suitable under these conditions to impart the necessary system and transformation knowledge for just socio-ecological transformation processes.

The presentation will first outline the conception and implementation of the course as a case study of interdisciplinary and arts-based education for sustainability. Then, based on data collected during the seminar, the course will be reflected on with regard to strengthening ESD competencies. Finally, lessons learned for transformative teaching practice will be formulated.

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Transforming the World One Conversation at a Time: Hopeful Language Pedagogy as a Key to Reimagining Education for Sustainability and Global Citizenship

Ricardo Römhild

What if the way we (learn and teach to) speak about the crisis is part of the crisis? Seeking alternatives to prevailing doom-and-gloom approaches to dealing with the poly-/meta-crisis in language (teacher) education (e.g., Porto & Zembylas, 2020), this presentation extends an invitation to envision language (teacher) education for sustainable development and global citizenship as pedagogy of hope.

In this time of crisis, ‘education as usual’ does not suffice. Hence, it is time to rethink conventional educational approaches and frameworks, both at the level of primary, secondary and higher education. Given the educational task at hand, as specified by SDG 4.7, all education efforts need to be re-evaluated critically – this includes in language education. The very basics of language education – communication, learning to argue, discuss, and listen, building tolerance for ambiguity and multiperspectivity – are key to all efforts toward global social justice, sustainability, and global citizenship.

This presentation will contextualize language (teacher) education as an integral, albeit unreferenced, element of SDG 4.7, and connect it to broader forms of liberatory, critical, and transformative education. In particular, the presentation will discuss critical pedagogy (of hope, Freire, 2004; of resistance, Giroux, 2022) as well as ecocosmopolitanisms as potentially fertile constructs that can inform guiding principles for language (teacher) education for sustainability and global citizenship. At the heart of this discussion sits one of the central learning objectives of language education, the ability to participate in global discourses, which will be revisited vis-à-vis the social aims of language education, that is, among others, the promotion of understanding across various scales of belonging, human and children’s rights, socio-environmental justice. Building on these intersections of critical pedagogy, eco-cosmopolitanism, and language education, the presentation will explore the concept of critical hope as a potential way of empowering educators and students to envision better, more just and sustainable futures and thus develop communicative agency rather than paralyze them through fear.

Based on theories and concepts of pedagogies of hope (e.g., hooks 2003, Freire 2004, Tarozzi & Bourn 2023, Römhild 2023), it explores the potential of hopeful approaches in teacher education. It reports on insights gained from a M.Ed.-level seminar taught at a German university with n=26 pre-service teachers of English (as a foreign language), which focused on hopeful pedagogies in the language classroom as well as two quantitative surveys conducted at German and Austrian teacher education institutions (n= 106). To gain data and extrapolate insights on the perceived self-efficacy of the participants as future educators in the hopeful language classroom, a variety of instruments were used in these studies, including a pre-/post-questionnaire design and individual e-portfolios compiling innovative, hope-oriented learning products created throughout the seminar. The results yield insights into the existence of a field of tension between prevailing doom-and-gloom approaches and more hopeful approaches to teaching and learning about global sustainability issues, which can be linked to the perceived self-efficacy and role of language teachers in this world.

If our objectives in language (teacher) education can move from awareness-for-the-severity-of-the-situation to awareness-for-our-transformative-potential, the argument goes, the language classroom can become a space of hope – both in teacher education seminars and at schools –, pursue its social aims, and support students and educators to engage in communicative, globally-situated action (see Biel & Esleben, 2025) in the face of adversity and crises.

This presentation best fits strand 1, particularly with regards to incorporating storytelling, arts, and creative methodologies into Higher Education, narrative and arts-based pedagogies for transformative learning and the role of creative methodologies in fostering key sustainability competencies. It also speaks to strand 3 – ESD’s role in fostering democratic citizenship, peace education, conflict resolution and social justice in Higher Education curricula.

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Dr. **Ricardo Römhild** is a teacher educator and scholar in the field of English language education. His work revolves around language education for global citizenship and sustainability – particularly socio-environmental justice, decoloniality, cosmopolitanism, human rights, and pedagogies of (critical) hope. With a background as a teacher at secondary and tertiary levels in Germany and the USA, these perspectives and questions inform his work both in research and in teaching at university and in teacher workshops. Ricardo has published various articles, books, and edited volumes. Among other projects, he currently works on a monograph with Palgrave Macmillan on *Language Pedagogy of Hope* (to be published in 2027), the co-edited (with William Gaudelli) *Elgar Handbook of Global Citizenship Education*, as well as a co-edited volume (with Frauke Matz) on language education for sustainable development.

“Engaged Citizenship through Interdisciplinary Practice” – a STEAM approach to foster collaborative, interdisciplinary learning and student engagement with scientific sustainability research

Simone Gumtau – Matt Smith – Jules Pettitt

Recognizing the potential of arts-based methodologies and interdisciplinary collaboration, this case study explores the ECITP module at the University of Portsmouth. The initiative aimed to foreground experiences of intuition and empathy – elements integral to the artistic and creative processes (Angel & Good, 2012) – and counterbalance historic mechanistic views of traditional science. Anchored in the STEAM paradigm (Carter et al., 2021), this pedagogical experiment seeks to bridge scientific research

and artistic practice to enhance science communication, critical thinking, and civic engagement among those engaged in creative arts studies.

The pedagogical framework prioritized open, emergent learning spaces, emphasizing process over product. This, it could be argued, facilitated deep learning and ontological transformations in “being” and “doing” as well as “knowing”. We considered experiential qualities and artistic perceptions (Backman et al, 2019; Thackara, 2022; UNESCO, 2017). Students from a span of disciplines such as architecture, visual arts, media, performance, design and computer games collaboratively engaged with real-world scientific challenges related to sustainability.

Core objectives of the module encompassed fostering interdisciplinary dialogue between arts and science, cultivating sustainability competencies such as systems thinking (Sterling, 2004) and ethics, and empowering students to communicate scientific issues creatively for diverse audiences. Additionally, the module aimed to nurture personal agency and societal responsibility through reflective and experiential learning modalities.

The delivery was co-facilitated by a team of academic staff from Design & Visual Culture, Applied Puppetry, and Computer Animation, with input from external scientific experts. Student assessment comprised a group presentation demonstrating collaborative project outcomes, alongside individual reflective blogs and reports intended to evaluate personal growth and learning processes. An implicit component of assessment involved the creative outputs, which were presented to scientific researchers in real-world contexts, thereby adding a dimension of authenticity to students’ extracurricular engagement.

Students were supported through activities emphasizing trust-building and embodied learning, aligning with theories of situated knowledge (Haraway, 1988; Latour, 1987). They investigated local sites using scientific observation methods integrated with artistic interpretation, fostering a holistic understanding of sustainability challenges. The module adopted participatory, arts-based techniques (McCrann, 2023) such as storytelling, sketching, puppet play, paper prototyping, mind mapping, and contemplative observation. These activities are aimed to foster trust, mindfulness, and experiential understanding. Digital tools, like the “Actionbound” app, enabled hybrid engagement during the first COVID-19 lockdown, allowing students to respond creatively to digital prompts grounded in their local environments and personal experiences.

The interdisciplinary approach proved effective in promoting mutual understanding and respect among students from various creative disciplines. All groups consistently performed well regarding the module outcomes and actively engaged in self-evaluation of their learning. Arts-based methods, it could be argued, fostered deep levels of engagement, reflection, and empathy, while digital tools maintained community and continuity amid challenging circumstances. Students reported increased agency, confidence, and the development of transferable skills, with reflective reports highlighting significant personal growth and a nuanced, sometimes novel understanding of sustainability issues.

This case emphasizes the potential of STEAM pedagogies within higher education to address complex sustainability challenges. By integrating arts-based practices with scientific inquiry, the module aligns with broader educational calls for participatory, communicative, and experiential learning models (Carter et al, 2021). It demonstrates how creative methodologies can empower students to become engaged citizens and future change-makers, equipped with the competencies required to interpret and communicate complex scientific phenomena effectively.

Fundamentally designed as an open learning space, the pedagogy encouraged constructive and emergent learning phenomena (Williams et al., 2012). It was deliberately open-ended, inviting learners to contribute their own content and forge personal connections with the subject matter. Students were guided to explore local sites using scientific methods of observation, classification, and ordering, which were then complemented by humanistic and artistic approaches such as drawing meaning through contemplation, interpretation, and making. Evaluations, including individual student reports and formal module feedback, indicated that this pedagogical approach facilitated profound personal learning experiences and fostered a sense of agency within sustainability discourse. Learners reported

increased confidence, humor, resilience, self-awareness, and the willingness to take risks—experiences were often felt to be novel, especially for students engaging with sustainability issues for the first time. It is noteworthy that, although the module was not explicitly framed as education for sustainable development, its design subtly integrated sustainability themes within the context of group work and creative collaboration, resulting in meaningful and engaging learning outcomes.

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Simone Gumtau: I am a designer, academic researcher and educator. For my research, I have designed haptic interfaces, responsive environments, complex adaptive interaction and multimodal, data driven interfaces for marine engineering, nonverbal expression, learning, and sustainability reporting. My interests are how we as humans interface with information, ecological and embodied approaches, interdisciplinary practice (art-science) and design research for change. I worked at the University of Portsmouth, UK, for over 15 years as a lecturer in Design and Visual Culture and I now contribute to processes of the higher education transformation towards sustainability in Germany.

The COLD MATTERS concept: changing perspectives in transformative learning

Eva Ritter – Inga Momsen

How can we foster agency, creative engagement, and a sense of meaning in students confronting the often overwhelming challenges of sustainability? The COLD MATTERS concept offers a response to this by merging principles from science, arts, and Indigenous pedagogies. It trains systems thinking and proposes a shift in perspectives to reframe questions and allow a renewed view on future pathways. The resulting transformative learning experiences resonate cognitively, emotionally, and sensorially.

Concept

COLD MATTERS is a transformative learning concept that we have developed in the thematic context of climate change. However, the concept is not restricted to this topic. The core of the concept is the shift in perspectives to reframe familiar issues from unfamiliar perspectives that put focus on positive experiences and emotions. The approach draws upon principles of *True Storytelling*TM which suggests introducing a “twist” or a so called “punctum” to a story to create a new focus (Larsen et al. 2021). The aim of the concept is to foster hope, connection, and creativity, which are crucial for engagement and transformative action. For example, rather than focusing on the dangers of future warming, the learners explore caring for cold as a shared experience and a symbol of interconnected ecological and cultural change. While cold is typically experienced as uncomfortable or undesirable, they learn to see it as something that is vital for ecological balances and central to life and cultural traditions.

Our first case study applying the *COLD MATTERS* concept in a wider context was carried out in collaboration with the Baltic Sea Project, a network of schools in the countries around the Baltic Sea. The network works with the Whole School Approach, engaging students and teachers alike in educational processes. We reflected upon and visualized the importance of cold for both the ecology and the culture of the region. Understanding what is being lost (not only physically, but also culturally) has become a powerful entry point into climate discourse. It was rooted in emotional relevance and identity and helped the students transcend despair and find positive emotional energies.

Methods

The concept combines our respective backgrounds in arts, natural sciences and education. The creative methods are central to the *COLD MATTERS* concept, as well as the place-based approach to learning inspired by Indigenous Ways of Knowledge and Indigenous Storywork (Cajete 2001; Archibald 2008). At the heart of COLD MATTERS lies storytelling: personal stories, traditional narratives, but also speculative future plots. Information becomes meaningful through stories, and personal, authentic stories are particularly powerful. The concept encourages learners to externalize their stories through artistic expression, including tactile, spatial and analogue practices that engage the whole person and create connectedness in a community. Thereby, abstract data and scientific information are anchored in experience, emotion, and identity.

These creative, sensorial modes of learning are often excluded from academic environments. Yet, they are essential for fostering sustainability thinking and agency. The emphasis on tangible learning connects directly to Indigenous pedagogies, particularly the principles of “heart, body, mind, and senses” and the place-based learning outlined by Q’um Q’um Xiiem (Jo-Ann Archibald) (Archibald 2008). Our approach respects and draws upon these principles in the following sense:

1. Heart: Cultivate emotional engagement, hope, and connection instead of fear or guilt.
2. Mind: Use stories as cognitive frameworks for sense-making and system-level thinking.
3. Senses: Translate narratives into aesthetic forms (e.g. sculptures, tactile art) that can be shared with others.
4. Body: Work in spaces and involve spatial thinking.
5. Place: Use site-specific learning grounded in the local environment and cultural context.

Our emphasis on analogue, embodied, and place-based practices also helps to counterbalance the abstract, screen-mediated forms of sustainability education. Artistic creation, even in small forms, generates joy, which becomes a motivating force. When students create something beautiful and meaningful, they begin to feel they can make a difference in the world. Furthermore, working with scientific facts and knowledge as a basis for the learning process avoids a drift into pure speculative processes.

By gaining insights into other specialist areas and exchanging information with each other, the learning process can lead to surprising results. Staying alert and open to experiments and new fields of inspiration that challenge us and take us further than the known is a basic requirement for aesthetic practice. Using the same approach and attitude in our lives can foster a deeper engagement with sustainability.

Conclusion

The *COLD MATTERS* concept shows how higher education can move beyond the transmission of facts to create transformative learning experiences that engage the whole person and communities. It merges arts-based experimentation, emotional intelligence, and interdisciplinary research with deep respect for Indigenous knowledge. In doing so, it opens new pathways for engaging with sustainability: not through fear or guilt, but through beauty, imagination, and hope.

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Dr. **Eva Ritter** is a trained geo-ecologist (Ph.D.) and obtained an additional M.A. in Education and Sustainability with focus on cultural values and oral storytelling in Education for Sustainable Development (ESD) in Greenland. Dr. Eva Ritter has worked as an Associate Professor at universities in Denmark, Iceland and England. Her research comprises processes in forest ecosystems, cultural connections between humans and nature and more recently storytelling in ESD. She now works as advisor, educator and freelance researcher in Education and Sustainability with her Institute Nordic Perspectives. In 2023, she was honored with the National Award ESD2030 by the German UNESCO commission and the Federal Ministry of Education and Research for excellence work in transformative education. This year, she received the Sustainability Award of the country Schleswig-Holstein.

Inga Momsen is a trained artist with a focus on perceiving spatial qualities and creating tailor-made works of art for spaces. She is fascinated by the temporary or permanent transformation of a space, considering its unique characteristics, possibilities, and stored narratives. Deliberately, she has never entered the teaching profession and puts a lot of effort into interdisciplinary collaboration in the field of cultural education at schools, kindergartens, cultural institutions, museums and universities. In a master's degree program in cultural education in schools, she examined the relationship between the interplay of school architecture and pedagogy with the aim of sensitizing people to the space around them. She works as a freelance artist, consultant, and educator.

stream 2 – ESD and heritage(s) for the future

Lausitzer Lernwelten – Educational Access in Transition: Cultural Heritage, Creative Methods and University Cooperation for Sustainable Development

Susann Troppa – Ellen Beuster

The joint project UNESCO 5 – Heritage of Lusatia connects five UNESCO sites in the Lusatia region (Germany and Poland) with the aim of reimagining education for sustainable development (ESD) through cultural heritage, creative methods and participatory formats. Located at the intersection of post-mining landscapes, structural change, and Sorbian minority culture, the project has generated a multifaceted educational offering that brings cultural, social, and ecological questions into dialogue with the region's future. The approach is low-threshold, arts-based, and bridges digital and analogue experiences.

At the heart of the project lies the transmission of Lusatia's tangible and intangible heritage — particularly the living Sorbian traditions — as a source of learning and transformation for sustainable development. Under the umbrella of the newly launched brand Lausitzer Lernwelten – We Move Education with UNESCO, new and inclusive educational formats were created, piloted, and refined. These range from immersive audio journeys and multilingual memory games to AR puzzles, guided training modules, and a university-level course in cooperation with Brandenburg University of Technology Cottbus–Senftenberg (BTU).

A key feature is the integration of artistic practice and heritage education. Commissioned illustrations representing Lusatian heritage were transformed into a multilingual memory game (German/Sorbian, German/Polish, German/English). Based on these “memo motifs,” local graffiti artists collaborated with young people and the football club FC Energie Cottbus to create a large-scale mural at the stadium. These visuals serve not only as community art but also as components of an interactive AR riddle, deployed in schoolyards and public events. It fuses analogue treasure hunts with digital storytelling and encourages all age groups to playfully explore their regional heritage.

An innovative format is a audio journey, a six-minute sound experience launched via a public transport poster campaign. It highlights the distinctiveness, similarities and contrasts between the five UNESCO sites and the intangible Sorbian heritage. Simultaneously, it contextualises the historical and ongoing structural change in Lusatia — thus linking past, present and future. The audio journey is freely accessible and forms a gateway to deeper learning activities.

As a bridge to higher education, the team co-developed a two-semester university module titled “Lifelong Learning through the Lusatian UNESCO Sites” at the Brandenburg University of Technology Cottbus-Senftenberg (BTU). Students attend lectures, excursions, and actively co-develop educational formats for diverse age groups. In the 2025/26 winter term, students will design a role-play simulation entitled “Beaver Life”, focusing on biodiversity, land use conflict and environmental conservation in protected areas. Educational AI tools will support the development — such as for chatbot prototypes or AI-generated podcasts — several of which have already been piloted by the project team.

Furthermore, the initiative introduced a training series for guides and volunteers, entitled “Heritage of Lusatia – Briefly Explained”. Over 150 participants have already completed this 90-minute training. Beyond knowledge transmission, future iterations will offer more space for storytelling and dialogue, aiming to acknowledge biographical perspectives and promote mutual understanding. In regions marked by migration, marginalization and transformation, such peer-to-peer encounters foster inclusion, democracy and resilience.

Based on insights from these trainings, focus groups and workshops, a new guided tour format is currently in development. It will address social and historical transformations in the region — from industrialization, deindustrialization, religious and political shifts to climate change and future scenarios. Special attention is given to the Sorbian community as a persistently present yet underrepresented voice of regional identity.

From 2025 onward, all these formats will be consolidated under the umbrella brand Lausitzer Lernwelten and published via a dedicated online portal, offering open educational resources, worksheets, and multimedia materials. In collaboration with a schoolbook publisher, accompanying teacher training courses will institutionalize the Lusatian UNESCO sites as learning venues for ESD in schools and curricula.

A crucial enabler of this educational transformation was the Award for Innovation in Education for Sustainable Development, granted by the German Commission for UNESCO in cooperation with the Fritz Henkel Foundation. This funding allowed the UNESCO 5 – Heritage of Lusatia project to evolve from early-stage ideas into a regionally anchored, model educational initiative within just 14 months.

This case study demonstrates how cultural heritage can become a powerful entry point for education for sustainable development — not only by transmitting knowledge but by enabling participation, dialogue, and identity-building. The project integrates storytelling and arts-based methods, leverages heritage for future-oriented place-based learning, encourages civic engagement and social cohesion, and exemplifies a whole-institution approach to ESD. In our presentation, project leads Susann Troppa and Ellen Beuster will share the design, implementation and impact of the formats and explore how cultural heritage can serve as a transformative educational resource, especially in structurally disadvantaged and post-industrial regions.

Susann Troppa studied International Tourism Management with a focus on marketing. As the head of the project “UNESCO 5 – Heritage of Lusatia” at the State Office for the Environment, her work focuses on building interdisciplinary partnerships, developing innovative educational formats and coordinating the joint communication of the project offerings. A key collaboration exists with the Department of Educational Science at Brandenburg University of Technology Cottbus-Senftenberg.

Ellen Beuster studied tourism management and cultural geography and has since deepened her knowledge of education for sustainable development in large-scale protected areas. She is now pursuing her interest in lifelong learning in the project “UNESCO 5 – Heritage of Lusatia” including collaboration with several chairs at the University BTU Cottbus-Senftenberg.

Place-Based Learning in the UNESCO Global Geopark Vulkaneifel: Linking Natural Heritage to Sustainability Education through Higher Education Collaboration

Sabine Kummer – Andreas Schüller

The UNESCO Global Geopark Vulkaneifel in Germany is a living laboratory where the Earth’s deep past connects with current sustainability challenges and future visions. As one of the most volcanically active regions in Central Europe’s geological history, the Vulkaneifel offers a unique natural heritage shaped by explosive forces: the Maars—a series of volcanic crater lakes—form its emblematic landscape and are at the heart of our educational mission.

Education for Sustainable Development (ESD) in the Geopark leverages this geological and ecological heritage to foster place-based, transformative learning. Work spans all educational levels—from early childhood and schools, through higher education, to adult and lifelong learning. Educational activities are closely intertwined with universities such as the University of Trier, the University of Bonn, the University of Jena, and the University of Würzburg, as well as international partners like Arizona State University. These collaborations include public lectures, tailored excursions, supervision of bachelor’s and master’s theses, internships, and student research projects conducted both in the Geopark and within university settings.

The Geopark’s educational programmes cover a broad thematic spectrum, reflecting the region’s multifaceted heritage. Topics include volcanic processes, sedimentology, mineralogy, palaeontology, limnology, and petrology, as well as climate history, settlement history, flora and fauna, and the socio-

economic impacts of geotourism. Many research projects explore the interconnections between volcanic phenomena and broader environmental or societal challenges, such as climate change.

Place-based learning is central to the educational approach. Instead of abstract lectures, learners are guided directly to volcanic craters, maar lakes, fossil sites, and ancient lava flows, engaging through experiential observation, measurements, and in situ discussions. The Maar landscape, as the world's most concentrated volcanic maar crater region, provides both a compelling visual narrative and an accessible scientific laboratory. Geological processes become tangible evidence of planetary change and resilience.

Storytelling is integral to educational methods, employed along guided "Mußepfade" (contemplative trails) and through narratives such as the story of Kamillen-Traud, a historic local figure connected to regional cultural heritage. These narratives link scientific knowledge with cultural memory, fostering emotional engagement and a strong sense of place.

The Geopark's initiatives strongly align with multiple Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), as well as SDGs 7, 8, 13, 15, and 17. A whole-institution approach to sustainability education is embraced, encouraging active reflection on sustainability dilemmas and goal conflicts—especially within school and youth programmes, but also in community education. The Geopark acts as a partner in integrating scientific knowledge into regional development, ensuring research outcomes are shared beyond academia for the benefit of local communities and global sustainability efforts.

Future directions include deepening partnerships with higher education institutions through joint research agendas, co-supervised theses, and collaborative educational formats. UNESCO Global Geoparks hold significant potential as platforms for ESD by linking heritage, sustainability, and community engagement in innovative ways. The Vulkaneifel exemplifies how natural heritage can inspire curiosity, critical thinking, and collective responsibility for sustainable futures.

Sabine Kummer, MSc Geology, is a geologist and an international representative of the UNESCO Global Geopark Vulkaneifel in Germany. She completed her master's degree in Geology at the University of Bonn in 2021, specializing in volcanology, geophysics, geoheritage and Education for Sustainable Development (ESD). She focuses her work on linking geology and sustainability through place-based learning, interdisciplinary approaches and community engagement within Geoparks. She is actively involved in educational and research projects in the Vulkaneifel region, collaborating with several universities, including the Universities of Trier and Bonn, as well as Arizona State University. She also has extensive experience in supervising student research, coordinating international partnerships, and organizing public educational events that promote awareness of the Earth sciences and sustainable regional development.

Heritage Futures Workshop

Cornelius Holtorf

How can cultural heritage guide us to a more sustainable future world? How can heritage shape who we wish to become? In this futures workshop we will train participants in futures thinking relating to heritage and thus enhance their futures literacy.

In the current fast-moving polycrisis, there is an increasing need for Higher Education Institutions not only to carry out innovative future-related research and to teach the next generation of professionals but also to provide training for current professionals.

Surprisingly, the heritage sector never professionally developed the basic concept of what it means to transmit the heritage to future generations who will live in a world that is different from ours. The benefits of preserving cultural heritage for future generations are commonly taken for granted and not based on foresight or anticipation. This lack is of increasing concern after the *2024 UN Pact for the*

Future supported the ideas that culture, including cultural heritage, is an integral component of sustainable development and that the needs and interests of future generations and long-term thinking should be embedded in policymaking processes throughout the member states.

The workshop is based on the work of the UNESCO Chair on Heritage Futures established in 2017 at Linnaeus University in Kalmar, Sweden (<https://lnu.se/en/unescochair>). We are asking how to combine the need to contribute to sustainable development for the future, including advancing peace and security in the world, with the widespread urge to conserve the heritage we value today. In the workshop we will discuss together which futures the heritage sector is working for, what we anticipate for these futures, and what concrete contributions heritage can make. We are ultimately asking about the need to reimagine heritage management for sustainable development.

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Cornelius Holtorf is a Professor of Archaeology and holds a UNESCO Chair on Heritage Futures at Linnaeus University, Kalmar, Sweden. He was educated in Archaeology in Germany and the UK, and has previously had positions at the Universities of Cambridge and Lund, as well as at the Swedish National Heritage Board in Stockholm. His current research interests include heritage futures, contemporary archaeology and the archaeology of the future. Recent publications include *Cultural Heritage and the Future* (co-edited with A. Högberg for Routledge, 2021) and *Wow! The Future is Calling!* (with Pernilla Frid, 2021, <https://issuu.com/lnu12/docs/wow>). More information about the work of the UNESCO Chair is available at <https://lnu.se/en/unescochair>.

Transdisciplinary International Learning Lab (TILL) as a space for developing intercultural and global skills in the context of sustainability and biosphere reserves/regions

Heike Molitor

Purpose of Study/objectives: The aim of the presentation is to introduce a transdisciplinary university format within the framework of the TRANSECTS project with biosphere reserves/regions and to present the results of these learning laboratories.

TRANSECTS (Transdisciplinary Education Collaboration for Transformations in Sustainability) is a six-year research training partnership. The main aim is to train professionals, students and practitioners in transdisciplinary research and intercultural skills to collaboratively address sustainability challenges. TRANSECTS prepares graduates to be the next generation of sustainability change makers by enhancing professional, relational, and intercultural skills. Part of TRANSECTS is the TILL (Transdisciplinary International Learning Lab), a research training program with biosphere regions in Canada, South Africa or Germany. TILLS provide international students with the opportunity to learn and apply professional, relational, and intercultural skills in the field. In 2024, the TILL brought together 18 trainees from diverse disciplines and different countries in Canada (Mount Arrowsmith Biosphere Region) to work alongside the practitioners/ community partners. TILLS were developed to promote a research and practice community (i.e. First Nations).

The TILL 2024 in Canada consists of a foundational course and an onsite training. The five-part foundational course was designed to introduce transdisciplinary research, Biosphere region context

and intercultural readiness. Under mentorship of researchers, practitioners, and community partners, 4 international student teams were addressing a locally determined issue that was aligned with the Sustainable Development Goals and the research and development needs of Mount Arrowsmith Biosphere Region and community partners. The TILLS were evaluated to measure the project goals.

The specific objectives of this study were: Understand how to develop individual hard and soft skills by creating a positive transdisciplinary learning environment and how to enable the selection and delivery of the right content and tools?

Methodology: The main instruments were focus group discussions (FGDs) with different groups of actors: the biosphere regions host team, the coordinators, the mentors, the instructors and the students. Recordings were then transcribed. All discussions were based on questions prepared by the Evaluation team.

Key findings and significance of the research: According to many of those involved, both students and the implementation team, the TILL 2024 was a very positive and stimulating experience. The students have learned in three areas: Connection & context, personal development and academic learning. Success factors and challenges were identified and conclusions drawn for the next TILLS. It is important to understand the TILL not as a single event, but as part of a series and an expanding network. It should therefore be seen in its entirety and what emerges from it: a network that will grow every year, connecting future and present transdisciplinary research and biosphere reserves/ regions specialists.

Heike Molitor works as a professor of environmental education and education for sustainable development at Eberswalde University of Sustainable Development. Her research focuses on ESD, transdisciplinarity, transfer, biosphere reserves and nature experience. She is a member of various advisory boards, such as the German National Committee of the Man and the Biosphere Programme.

Green Cities: Historical Perspectives on Sustainable Urban Living

Thomas Lekan

My paper explores the design, implementation, and efficacy of three creative ESD methodologies that catalyze student engagement and enhance their understanding of socially just sustainability transitions: (1) stories of grassroots action; (2) beyond-the-class room field experiences; and (3) service-learning with community partners. My paper highlights how changes in pedagogical approach and scale can mitigate growing student anxiety (and hopelessness) due to the climate emergency.

Students in my ENVR capstone seminar on conservation policy and resource management reported feeling powerless in the face of grim reports about ever-escalating GHG pollution levels and global temperatures, to the point where linkages between local action, intergenerational justice, and global ecological change began to fray. To me, this was a crisis of the imagination as much as it was one about industrial processes, smart technologies, or data analytics. Indeed, the relentlessness of climate forecasting thrust students into endless futurity in which they felt severed from the past, making it impossible to imagine a just and sustainable future. Colleagues across departments at my home institution and ones at other institutions I met at conferences reported similar challenges.

My “New Horizons” paper focuses on how educators can reconceive course modules to envision heritage landscapes/infrastructures as resources for sustainability transitions, inspire stories of environment change, and develop practical knowledge using knotty or underutilized spaces on or near campus. Since I teach on an urban campus, I found that shifting topics from courses on the (largely exurban) parks in this region to green cities created space for concrete, realizable projects that could snowball into bigger changes down the road. Remaking the final project was also crucial to student success: I changed the course project from a traditional literature reviews/policy analysis to a series of shorter assignments and oral presentations employing place-based storytelling, journaling, design charettes, and service-learning. The paper argues that history-as-storytelling reveals sustainability as

an emergent process enmeshing humble places, ordinary citizens, and especially *contingency*. As the authors of *A U-Turn to the Future: Sustainable Mobility since 1850* have noted: “Decisions made by previous generations have shaped our current societies [...] History is therefore a key discipline to provide insight and guidance in achieving sustainability.” (Martin Emanuel, Frank Schipper, and Ruth Oldenziel, eds. *A U-Turn to the Future: Sustainable Urban Mobility since 1850* (Routledge, 2020), 305.) Qualitative student evaluations of their experiences highlight the efficacy of these approaches.

Thomas Lekan (PhD, University of Wisconsin-Madison, 1999) is a Professor of History at the University of South Carolina in Columbia, SC. He currently serves as the department’s Associate Chair, teaches in the South Carolina Honors College as a Pearce Honors Fellow, and is an affiliate in the School of the Earth, Ocean and Environment. He has just completed a new book with Carol Hager of Bryn Mawr College called *Green Germany: Local Pathways to Global Sustainability*, which will appear with Cambridge University Press in 2026. This book aligns well with the themes of “Charting New Horizons, as it offers students inspiring stories of the grassroots coalitions who built the Green German Model in the 1990s and early 2000s: anti-nuclear protestors, do-it-yourself housing cooperationists, tram supporters, East German nature conservationists, and green space advocates who rushed to save parklands along the former Berlin Wall in 1989. Thomas is also the author of *Imagining the Nation in Nature: Landscape Preservation and German Identity, 1885-1945* (Harvard University Press, 2004) and *Our Gigantic Zoo: A German Quest to Save the Serengeti* (Oxford, 2020), which won the German Studies Association’s DAAD Book Prize for History and the Social Sciences in 2021. Tom teaches classes that meld historical knowledge and sustainable futures, including “Into the Wild: Global Conservation since 1800,” “Visions and Revisions of Nature: Environmental History and the Ecological Imagination,” and “Green Cities: Historical Perspectives on Sustainable Urban Living,” from which today’s presentation comes.

Surfacing Southern African Agroecological Heritage as a Nexus for Engaging Past, Present and Future in a Needs-Based Approach to Education for Sustainable Development in Higher Education Settings

Leonard Molefe

This research explores how Southern African agroecological heritage can be utilized as a dynamic educational resource that connects past, present and future in teacher education. Inspired by Fischer’s (2025) concept of a “reconnecting” pedagogy within an “integrating” curriculum process that puts emphasis on sustainability as a shared experience, the research focuses on living sustainability through engagement with real-world practices and ecological knowledge systems. Most importantly, it integrates science process skills (SPS) embedded in (scientific) inquiry.

At the approach’s core is the recovery of heritage knowledgescapes, that is, indigenous and place-based ways of knowing and doing that have evolved through centuries of biocultural interaction with the land. Colonial schooling systems suppressed these knowledges, framing indigenous peoples as degraders of nature and scientific knowledge as the sole source of environmental truth. This exclusion created a disconnect in sustainability education (SE), where the curriculum often presents human-nature relations through fragmented binaries. The appropriate teaching and learning approaches associated with the development of SPS, such as (scientific) inquiry, are often equally marginalized.

To address this, the research adopts a situated learning approach, shifting from abstract environmental frameworks to understanding “living landscapes” as outcomes of sustained biocultural co-evolution. This conceptual and pedagogical reorientation allows for the re-entry of historical knowledge practices into curriculum design. Drawing on Cultural Historical Activity Theory and Figuration Sociology (after Norbert Elias), the research maps how indigenous knowledge systems can be meaningfully integrated into Education for Sustainable Development (ESD) through a needs-based reading for heritage-activated curriculum that develops scientific skills (e.g., SPS).

Qualitative, design-based research involving student teachers, their educators and community members explored the potential of heritage practices to guide deliberate learning around sustainability. Inspired by the work of indigenous environmental scholars like Nomlomo Goduka, the research identifies agroecological practices as rich entry points for reconnecting learners with ancestral knowledge systems, hence presents a conceptual model for intergenerational inquiry rooted in indigenous epistemologies, supporting critical reflection and transformative engagement.

Indigenous agroecological knowledge, often dismissed or overlooked, contains valuable insights for addressing contemporary sustainability challenges. Practices like seed saving, composting, veld burning, seasonal harvesting, intercropping, wild fruit gathering and water conservation strategies have been sustained through oral transmission and community stewardship. These practices have evolved with changing climatic, cultural and socioeconomic contexts, offering a basis for adaptive learning and responsive teaching in ESD.

The research provides a provisional mapping of agroecological heritage practices for learner-led (scientific) inquiry and community engagement. Students started with story-sharing activities, grounding their understanding in lived experiences, and then moved into inquiry-based exploration. This four-quadrant progression (from narrative, situated inquiry, deliberate learning to possible change projects) provides a scaffold for integrating heritage practices with (scientific) inquiry and SPS in teacher education programs. Our second relational mapping links indigenous practices to specific sustainability competences that include veld burning, human honey collectors-honey guide bird cultural-ecological symbiosis, and nutrient cycling via livestock manure and compost. These relational knowledges reveal ecological intelligence embedded in cultural practices and offer opportunities for critical, embodied learning for teacher education students.

The curriculum process proposed in this research emphasizes intersectional and transdisciplinary learning, where science, culture and sustainability are mutually informing. The pedagogical model enables student teachers to engage in deliberate knowledge creation, actively interpreting and applying heritage practices to real-world sustainability concerns. This process strengthens SPS development, deepens ecological consciousness and fosters a sense of agency among learners.

Including heritage knowledge systems in teacher education promotes epistemic justice and curriculum transformation. By legitimizing indigenous ways of knowing, it challenges dominant narratives and creates space for a pluralistic, inclusive and contextually relevant SE. This aligns with global discourses on decolonizing education and SDGs that call for local knowledge integration. It also endorses the development of SPS through (scientific) inquiry, tapping into UNESCO's "A new social contract for education" (UNESCO, 2011), which emphasizes reimagining education for sustainable futures.

In conclusion, surfacing agroecological heritage in a reconnecting pedagogy offers a transformative pathway for needs-based ESD in higher education. Integrating historical and contemporary biocultural practices enhances ecological literacy and cultivates critical, ethical, and locally responsive teachers. The heritage-activated ESD curriculum model will be piloted and refined with teacher education institutions and communities to ensure its applicability, inclusiveness and sustainability across diverse contexts.

Dr **Leonard Molefe** is a Senior Lecturer in the School of Education at the University of KwaZulu-Natal, South Africa. His teaching and research experience spans Environmental Education (EE), Life Science, and Natural Sciences. His recent scholarly work, which bridges Science Education and EE, has been shared at national and international platforms. This work has contributed to collaborations in ESD, and peer-reviewed journals, notably in scientific investigations, science process skills, and SDGs.

Dung and Filāḥa: Genealogies of Fertilizer in Arabic Agriscience

Eyad Houssami

A glimpse into 1950s agricultural education in Beirut, Lebanon, offers insights into how universities were the engines for the transformation toward industrial, fossil fuel-based cultivation. An analysis of scholarly debates on manure and fertilizer by the likes of Habib Zayat and Halim Najjar illuminates how modern Lebanon shifted – ecologically and epistemologically – from organic to synthetic fertilizer, from dung as resource to manure as waste. Central to these debates are the overlapping yet dissonant notions of *filāḥa* and *zirā'a*. Both these terms could be imprecisely translated as agriculture; however, my paper argues that *zirā'a* – not the *longue durée* discipline and science of *filāḥa* – became the epistemological cognate of industrial agriculture in the Mashriq (Arab Levant). Whereas *filāḥa* embedded humans in multispecies relationality and in a more circular economy, *zirā'a* was enrolled by figures like Najjar to advance reformist agendas intertwined with anglophone agronomy. This historical case study suggests that the transformation toward sustainable agriculture today might benefit from more consideration in pedagogy of bygone terms and affiliated ways of tending the earth.

[Eyad Houssami](#), PhD, is a writer, consultant, and organization leader. With the United Nations Food and Agriculture Organization, he is retained on the consultancy roster as an expert on climate change as well as a policy and program support specialist. His projects, books, and organizations have been supported by the Ford Foundation (US); Prince Claus Fund (The Netherlands); Arts & Humanities Research Council (UK); Sundance Institute and Fulbright (US); and Saison Foundation (Japan) among others. He earned his Bachelor of Arts at Yale University, completed his doctorate at the University of Leeds, and trained as an apprentice on an ancient organic farm, Bassatin Baanoub, in southern Lebanon. His forthcoming book examines higher education and ecology in the mid-twentieth century.

ESD through Heritage Education in Schools: Needs and Potentials for Developing Heritage Education as a Participatory, Future-Oriented Academic Field

Claudia Grünberg – Klaus-Christian Zehbe

Education for Sustainable Development (ESD) is well established as a cross-cutting topic in German school education and increasingly implemented in curricula (Hauenschild & Bolscho 2022, Brock, de Haan, Holst & Singer-Brodowski 2020). The authors argue that in the combination of Heritage Education with ESD lie significant potentials for future-oriented and participatory formal as well as informal education processes (Wulf 2023; Grünberg & Zehbe 2023; Institute Heritage Studies & German Commission for UNESCO 2025). Heritage Education is here understood to cover material, immaterial and natural heritage elements, as broadly conceptualized in World Heritage Education (Meyer & Röhl 2021; German Commission for UNESCO 2025). However, Germany has in this respect a significant policy and academic lag compared to other European countries (Berti & Zehbe 2024). Heritage Education in Germany is thus not systematically realized neither in school curricula nor teacher training, despite clear connections to school subjects and curricula (for intangible cultural heritage see Leineweber 2024). Current approaches in Heritage Education are often developed from a disciplinary perspective on the past and its remains in museum pedagogy, architectural conservation, heritage interpretation (interpret Europe 2025), (local) history (Doorselaere 2021) as well as art history or arts education (Gesche-Koning 2018). Consequently, participatory, future-oriented approaches to imagine and shape possible futures (de Haan 2009) are often lacking in Heritage Education. The extraordinary potentials of Heritage Education are thus often untapped (Grünberg & Zehbe 2022) and existing approaches frequently lack solid theoretical underpinnings and transdisciplinary connections (Fontal, Martínez-Rodríguez & García-Ceballos 2023).

Objectives

With the presentation, the authors will show potentials of Heritage Education for further conceptual development of ESD in higher education settings with particular reference to teacher training and future-oriented, participatory approaches. Based on anthropological considerations (Fink 1987; Kößler 1997; Wulf 2023) and new materialist approaches (Haraway 2016; Loh 2019), a theoretical model is developed for the diversity of different heritages. This model has ethical implications for holistic approaches to future-oriented and participatory Heritage Education. In a second step, the authors show a best-practice example on the basis of the transnational project “Young Climate Action for World Heritage” in which a student-centered, action-oriented and transformative approach was applied (Grünberg & Zehbe 2023; Institute Heritage Studies & German Commission for UNESCO 2025). In a third step, the authors will discuss the potentials of Heritage Education in the framework of ESD for practical teaching activities as well as curriculum development. In doing so, the aim at contributing towards the establishment of Heritage Education as an academic field in Germany as well as to conceptually further develop the field of ESD.

Methodology

The authors draw on theoretical considerations from educational anthropology (Fink 1987; Kößler 1997; Wulf 2023), literature reviews on educational approaches in the field of heritage (Grünberg & Zehbe 2022; Fontal, Martínez-Rodríguez & García-Ceballos 2023; Berti & Zehbe 2024) as well as reflections on best practices and outcomes of practical projects in the field of heritage the authors have been involved in (Grünberg & Zehbe 2023; Institute Heritage Studies & German Commission for UNESCO 2025; Wagner & Zehbe 2024; Keidel, Wagner & Zehbe 2025).

Key findings

Apart from a few initiatives (Röll & Meyer 2020; Meyer & Röll 2021; Grünberg & Zehbe 2022; 2023; Leineweber 2024), Heritage Education in Germany is currently undertheorized as an academic field and underdeveloped in policy discourse (Berti & Zehbe 2024). In European comparison, Germany has a significant need in the development of policies as well as a lag in the development of Heritage Education as an academic field. Outcomes of projects in the field of heritage show (Grünberg & Zehbe 2023; Institute Heritage Studies & German Commission for UNESCO 2025; Wagner & Zehbe 2024; Keidel, Wagner & Zehbe 2025) that participatory and future-oriented approaches can be realized with specific didactic approaches tailored for different age groups. These outcomes can be used as models for practical teaching activities as well as curriculum development both in higher education as well as school settings.

Significance

Both theoretical as well as empirical findings show the development potential of Heritage Education for ESD in Germany. There is an urgent need for further theoretical efforts as well as empirical research to leverage the full potential of Heritage Education in Germany.

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Claudia Grünberg is deputy director of Institute Heritage Studies, Berlin, with ten years of professional experience in the heritage field. Her work focuses on the educational mandate of the UNESCO World Heritage Convention by developing and implementing national and international projects for schools, teacher training seminars and teaching materials as well as workshops for civic society. Her most recent project „Young Climate Action for World Heritage“ (2022–2024), developed in cooperation with the German Commission for UNESCO and funded by the German Federal Environmental Foundation (DBU), positioned World Heritage Sites as educational resources for the Agenda 2030 and Education for Sustainable Development. As a freelancer, she works in the areas of World Heritage nomination, management planning, and heritage interpretation.

Klaus-Christian Zehbe is a consultant in the fields of culture, heritage and education. He worked at Brandenburg University of Technology Cottbus, TU Dortmund University and at Leipzig University. He is member of the German Educational Research Association (GERA/DGfE), the Association of Critical Heritage Studies (ACHS) and member as well as board member of the International Association of World Heritage Professionals (IAWHP e. V.). He is currently working with the Institute Heritage Studies, Berlin, on the theoretical conceptualization and practical implementation of heritage education in Germany.

stream 3 – ESD, democracy, and peace

The Ethics and Politics of Sustainability in Indonesian University Governance and Pedagogy under the Jokowi Administration

Warjio – Neni Juli Astuti

This presentation critically interrogates how the ethics and politics of sustainability are embedded and contested within Indonesian university governance and pedagogical practices during the Jokowi administration (2014–2024). Amidst growing global and domestic pressures to align higher education with sustainable development goals (SDGs), this research explores how state policy, bureaucratic governance, and institutional autonomy intersect to shape sustainability discourses and implementation across Indonesian campuses. The inquiry is situated within the broader framework of political ecology, educational ethics, and post-development theory to assess whether the pursuit of sustainability serves emancipatory or instrumental ends in the contemporary university.

Objectives

The core objectives of this study are fourfold:

1. To examine the normative tensions between sustainability ethics and political interests in Indonesian higher education reforms.
2. To map how national policies under President Joko Widodo influence sustainability strategies and discourses within university governance.

3. To analyze the extent to which pedagogical practices in public universities internalize or resist state-driven sustainability agendas.
4. To reflect on alternative frameworks that foreground ethical responsibility, ecological justice, and epistemic plurality within academic institutions.

Methodology

This research adopts a qualitative and multi-scalar methodology, combining document analysis, critical policy discourse analysis, and semi-structured interviews with policymakers, university administrators, and lecturers at five public universities across Sumatra and Java. Supplemented by participatory observation and ethnographic field notes, the study critically examines key policy documents—including the Kurikulum Merdeka, Ministry of Education’s Sustainable Campus Guidelines, and related presidential decrees—while embedding its findings in local narratives and institutional memory. A hermeneutic approach grounded in interpretivist political theory enables the interrogation of moral language, symbolic legitimacy, and governance logics shaping sustainability initiatives.

Key Findings

The study reveals that sustainability discourse in Indonesian university policy is characterized by a technocratic-reformist logic, prioritizing economic and bureaucratic efficiency over ecological and ethical commitments. While initiatives like green campus accreditation and SDG alignment are expanding, they often mask deep-rooted contradictions related to academic freedom, labor precarity, and environmental justice. Universities operate within a constrained autonomy regime, where compliance with national mandates often supersedes grassroots innovation or critical pedagogy. However, instances of pedagogical resistance and curricular innovation persist—particularly in courses integrating indigenous knowledge systems, critical environmental history, and ethics of care—demonstrating the agency of scholars in negotiating state agendas.

Significance

By unpacking the dialectics of ethics and power in university sustainability governance, this presentation contributes to emerging scholarship on decolonial pedagogy, environmental politics, and post-neoliberal higher education futures in the Global South. It challenges reductionist metrics of sustainability and calls for a shift toward participatory governance models that restore moral agency, ecological mindfulness, and epistemological diversity to academic life. The workshop invites scholars, educators, and policymakers to co-develop context-sensitive, ethically grounded, and democratically accountable models of sustainability in Southeast Asian higher education.

Warjio is Assistant Professor of History and Political Science at Universitas Sumatera Utara (USU) and former Head of Political Science Department at USU. He designs curricula that integrate comparative historical methods with contemporary policy analysis and serves as Executive Secretary of the USU Centre for Health Politics and Management (UCHPOLM). His research focuses on comparative penal systems, colonial governance, and state legitimacy across Southeast Asia. He has held international fellowships and actively contributes to transnational scholarly networks on governance and institutional accountability. He teaches interdisciplinary modules that connect heritage, civic agency, and sustainability in higher education.

Neni Juli Astuti is Researcher at the Education Quality Assurance Agency (BPMP, Balai Penjaminan Mutu Pendidikan) North Sumatra, Indonesia. She teaches interdisciplinary modules that connect education quality, heritage, civic agency, and sustainability in higher education.

Resisting Soft Authoritarian Regime in Nigeria: What Role could Academia's "Voices on Ink" Play?

Philipp Egbule – Jennifer Ibezim – Ogwudile Chinyere Mary

Introduction/Objectives

The global surge in right-wing extremism, characterized by the rise of anti-democratic and anti-liberal tendencies, has become a significant contemporary political trend. This shift, often described as “soft authoritarianism,” entails the gradual erosion of democratic norms under the guise of democratic governance. Nigeria offers a compelling case study of this phenomenon. Despite its transition from military rule to civilian governance in 1999, the country's democratic institutions have increasingly come under threat, exhibiting hallmarks of authoritarianism. This phenomenon, mirrored in nations such as Hungary, India, Brazil, and Turkey, involves democratically elected leaders systematically eroding liberal institutions through subtle manipulations of the electorate, as highlighted by social anthropologist Shalini Randeria. This research aims to critically examine the infiltration and normalization of authoritarian practices within Nigeria's democratic structures. Specifically, it focuses on the suppression of dissent, the manipulation of political processes, and the systematic curtailment of civil liberties. These elements together contribute to a deceptive appearance of democracy while undermining its core values. Furthermore, the research seeks to explore the significant role of academia in countering this authoritarian drift. By investigating the contributions of Nigerian scholars and public intellectuals, framed within the conceptual scope of "Voices on Ink"—the study aims to illuminate how academic discourse can serve as both a site of resistance and a catalyst for democratic renewal. It also considers the risks and constraints faced by academics in environments where freedoms of speech and academic inquiry are increasingly curtailed.

Methodology

The research adopts a qualitative methodological approach, utilizing both primary and secondary sources to critically analyze the erosion of democracy in Nigeria. The study conducts a thematic analysis of existing literature, including scholarly articles, books, public lectures, and policy briefs relevant to Nigeria's political environment and the global trend of democratic backsliding. Particular attention is paid to the writings and public interventions of Nigerian academics, journalists, and social commentators who engage with the socio-political challenges posed by authoritarian governance. In addition to textual analysis, the study draws upon reports from human rights organizations, civil society groups, and media coverage that document state actions infringing on civil liberties. This triangulation of data ensures a comprehensive understanding of how authoritarian practices are being implemented and resisted. By mapping these academic and civil society responses, the research outlines possible strategies for fostering political accountability and safeguarding democratic institutions.

Key Findings

The findings reveal a disturbing pattern of democratic regression in Nigeria, marked by state-sponsored efforts to silence dissent, limit civil society participation, and consolidate executive power. These practices often occur within the bounds of formal democratic procedures, making them more insidious and difficult to challenge directly. The manipulation of electoral processes, judicial interference, and clampdowns on press freedom are among the key features identified. Significantly, the research highlights the crucial role of Nigerian academia in confronting these authoritarian tendencies. Through critical scholarship, public commentary, and civic engagement, academics serve as vital defenders of liberal democratic values. The study identifies a range of intellectual interventions, collectively termed “Voices on Ink” that have challenged state narratives, exposed abuses of power, and advocated for democratic reforms. However, the findings also underscore the precarious position of academics in Nigeria, many of whom face intimidation, censorship, or professional marginalization for their dissenting views. Despite these obstacles, the academic community continues to influence public discourse, inform policy debates, and support civil society mobilization.

Significance of the Research

This research contributes to the broader understanding of how authoritarianism can infiltrate and undermine democracies from within, especially in post-authoritarian societies like Nigeria. By foregrounding the role of academia, it emphasizes the importance of intellectual freedom and critical thought in sustaining democratic governance. The study also provides a framework for understanding the intersection between scholarship and political activism, demonstrating how knowledge production can act as a form of resistance. In an era of global democratic decline, this work underscores the urgency of protecting academic spaces and voices that challenge authoritarianism. It advocates for strengthening the institutional and civic infrastructures that support democratic resilience and calls attention to the transformative potential of scholarship in defending democratic ideals in Nigeria and comparable contexts.

Philip Egbule is a Nigerian and lectures at the University of Delta, Agbor, Nigeria. As a social scientist and educator by training, his primary scholarly interests encompass global issues, African culture and politics, human rights, gender issues, and social problems. He is an active member of several professional associations, including the Canadian Association of African Studies (CAAS). Over the years, he has contributed extensively to academic research, with 59 published scholarly articles and more than 40 conference and workshop presentations between 2013 and the present. He is curious minded, flexible, and endowed with the capability to cope in multicultural environments.

Jennifer Ogochukwu Ibezim is a dynamic scholar and creative entrepreneur with a strong interdisciplinary background in international relations, media, and creative industries. She is currently pursuing a Master of Science in International Relations and Diplomacy at Nile University of Nigeria, Abuja, where she also completed a Postgraduate Diploma in the same field. She holds a Bachelor of Science in Mass Communication from the National Open University of Nigeria and a Diploma in Theatre Arts from the University of Port Harcourt. Her research interests include global affairs, African politics, peace and conflict resolution, and human rights advocacy. Through her multidisciplinary background, Jennifer bridges the worlds of diplomacy, creativity, and communication to advance inclusive dialogue and development across African societies. When she is not engaged in research or advocacy, Jennifer enjoys film production, photography, fashion, interior design, and exploring cultural diversity through travel and writing.

Ogwudile Chinyere Mary hailed from Issele-Asaba in Aniocha North Local Government, Area of Delta State. She works with university of Delta Agbor, is currently a senior executive officer in the department of History and International Studies. She obtained a B.Sc. in political science at Delta State University Abraka in 2015. She had her secondary school leaving certificate at Owe secondary school Owe in 2000, had her primary school certificate in 1996. She is a member of Teachers Registration council of Nigeria (TRCN). Currently, she is the Exam Officer in the Department of History and International Studies. Her hobbies are reading and watching news, performing voluntary humanitarian services.

Students' Experiences of Higher Education in Emergencies as a Path to Peace and Sustainable Development

Mélodie Honen-Delmar

This research explores how higher education can act as a catalyst for peace and sustainable development by creating opportunities for individuals from crisis-affected and marginalized communities. Drawing on Barnett's (2007, 2024) ecological conception of the university and Freire's (1970) pedagogy of conscientization, it examines the experiences of students enrolled in a Bachelor in Sustainable Development program as a way of considering the role and impact of Higher Education in Emergencies (HEiE).

Using a mixed-method case study design, the study draws on interviews and survey responses from more than 40 displaced students and graduates of the BASD program, delivered in a blended format through a partnership between Xavier Institute of Management and University (XIMU) and Jesuit Worldwide Learning (JWL). The analysis focuses on four contexts: Kakuma Refugee Camp (Kenya), Dzaleka Refugee Camp (Malawi), Afghan female refugee graduates, and displaced students in Kurdistan, Iraq.

Findings indicate that, despite fragile living conditions, learners reported personal growth, the development of critical skills, and engagement in peacebuilding, sustainability initiatives, and community leadership. The study invites a reconsideration of the epistemological and societal contributions of higher education, moving from individual experiences to its broader role in contexts of crisis. It also highlights how participation in HEiE may foster peacebuilding practices, sustainable community engagement, and a sense of shared global responsibility among students.

The paper reflects on the importance of higher education institutions engaging not only with formal curricula but also with hidden and lived dimensions of learning to support student emancipation and societal transformation. It suggests that reimagining higher education in ecological and inclusive terms may strengthen its contribution to building peaceful and sustainable futures. Finally, the study points to the potential of higher education, when guided by inclusive and peace-oriented approaches, to enable marginalized individuals to act as agents of ecological and social change.

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Unleashing global democracy and youth driven climate impact

Carolyn Rautenberg – Daniel Michelis

In response to the global urgency for collaborative problem solutions, we piloted a project-based COIL seminar (Collaborative Online International Learning) from March to June 2025 aimed at empowering youth from partner universities in Tanzania, South Africa, and Germany. By connecting students from different cultural and socio-economic worlds, our goal was to develop a learning experience that unleashes the unique transformative potential of intercultural collaboration. The seminar was based on established basic principles of COIL, with which we have already gained experience in previous years: Co-design and co-moderation by university teachers from the participating universities, digitally mediated collaboration, transparently communicated intercultural goals and shared responsibility (Hackett et al., 2024). Before conveying the content, we focused on building personal relationships with each other during the event. These personal relationships are a central foundation for intercultural competence, democratic engagement and ultimately also for peacebuilding, as students develop global solutions together in self-organized cross-continental teams.

With the aim of placing team building at the beginning of the learning journey, we started with a personal reflection. For this, students had to reflect on their individual day in their home country and record it as a short “A Day in Your Life” video. The videos were then shared with each other and provided an easy introduction to the cultural everyday life of the “others”. After this individual reflection, work began in international teams using a method we call “mirror space”. In small groups,

students analyze important differences and similarities of their cultures and translate these into a Mirror-Space project (e.g., fusion food, connecting music, shared dance, or AI mashups) to foster empathy and cultural sensitivity.

The intercultural reflection and personal connections in the groups created build the indispensable basis for joint problem solving. At this point we do introduce the task to the intercultural groups to address global challenges (climate change, environmental pollution, loss of biodiversity) and develop balanced, culturally informed solutions together. This matches the problem-oriented collaborative design of COIL (Borger, 2022).

To deepen real-world relevance, students in their assigned intercultural mixed groups collaborated with practitioners such as the Enviro Kids Organization to create concrete impact working on real case problems of climate crisis in Tanzania. As an outcome, the best student-designed initiative, a nature education trail is now being implemented, exemplifying tangible outcomes and civic agency.

The impact oriented intercultural dialogue elevated students into democratic spaces, reinforcing critical thinking, participatory governance, and peace education in higher education. Students reported significant growth in climate consciousness, civic responsibility, and self-identification as initiators of change. By embedding scientifically grounded COIL practices—such as shared accountability, positive interdependence, and intercultural scaffolding— this case study demonstrates how universities can serve as democratic and peaceful catalysts for sustainable transformation. This model highlights the capacity of youth to lead with civic purpose in addressing interconnected global crises.

Through our envisioned workshop, we seek to explore the transformative potential of the COIL methodology in greater depth, offering participants—including students, lecturers, and researchers— practical insights into the structured implementation and pedagogical impact of this interculturally grounded approach. We will critically examine both the challenges and enablers involved in creating a digitally interconnected and culturally sensitive learning environment. Particular emphasis will be placed on the intentional design of intercultural experiences, beginning with individual self-reflection and culminating in collaborative group work aimed at real-world impact.

The workshop will feature interactive breakout sessions, each focused on a distinct pedagogical layer of the COIL model: (1) personal cultural exploration through the “Day in Your Life” reflection activity; (2) intercultural co-creation in “Mirror Spaces,” where students merge personal narratives into shared cultural expressions; and (3) collaborative impact development through real-world case studies, such as NGO partnerships. These sessions will invite participants to critically analyze the mechanisms that enable intercultural connection, joint problem-solving, and the advancement of democratic values within global education.

Ultimately, the workshop aims to establish a dynamic platform for peer learning, foster the exchange of best practices, and encourage the broader adoption and contextualization of COIL formats in higher education. By creating space for critical reflection and practical dialogue, we aspire to equip educators and institutions with tools to embed COIL methodologies in curricula that promote democratic citizenship, social cohesion, and global responsibility.

Carolyn Rautenberg is co-lecturer at the project COIL at Anhalt University of Applied Sciences.

Daniel Michelis is a professor at the Anhalt University of Applied Sciences. He teaches and researches how digital communication can contribute to the positive development of the economy and society. He works on social, economic and ecological challenges of economic and social transformation in a variety of projects. He is interested in innovative approaches that bring about long-term positive social and ecological change.

From people affected to people involved: Universities as democratic learning spaces in global discourse

Katharina Lingenaus

In times of global polycrises, universities are playing a central role in promoting democratic education and sustainable development. The Goethe-Institut's transnational educational project International Digital Network University/[Internationale Digitale Netzwerkuniversität](#) (INU) represents an innovative approach to rethinking this role: with a focus on participatory, digital and intercultural teaching formats, it strengthens democratic skills, critical thinking and a reflective approach to diversity - across national, cultural and disciplinary boundaries. The INU is a growing network of currently 15 universities in Europe, the Mediterranean region, the Middle East and the USA that works together on future-oriented curricula and digitally supported teaching formats.

The presentation introduces the INU as a learning network that develops teaching modules together with European and non-European partner universities in which sustainability, democracy and global justice are not only addressed, but also methodically anchored. The aim is to enable students to leave their own "bubble" and actively participate in social transformation. The underlying theme of "Turning those who are affected into participants" (Robert Jungk) is the guiding principle for teaching, governance and institutional cooperation. The presentation highlights:

- how intercultural, digital learning spaces can promote democratic participation in university teaching,
- how a propaedeutic/preparatory course can help overcome language barriers and a support facing subject-specific knowledge and wording,
- how universities can become points of civil society change through transnational curricula.

The project is based on activating and action-oriented methods: it connects teaching and lecturers, research and cultural practice and actively involves students in program design. Individual subject-specific modules, such as the propaedeutic course, have their own methodology. The aim of the course is to ensure that foreign participants in the German-language INU courses acquire language, subject, translation and translator skills. The general CLIL (Content and Language Integrated Learning) approach of the propaedeutic course is based on didactic and methodological principles, which include action, task and competence orientation, backward planning and anticipatory use.

The INU's digital modules - for example "Inter- and transculturality", "Intercultural justice", Conflict prevention and peace studies", "Education for sustainable development – shaping futures" or the propaedeutics for the above-mentioned modules - are tested, adapted and further developed in participatory workshops within the project context. The thematic expansion through the development of new learning modules takes place continuously through various partners of the INU. The presentation uses practical examples to reflect on the opportunities and challenges of transnational democracy education in university teaching. The key question is how universities can still create learning spaces for peace, participation and transformation in a field of tension between political pressure, resource conflicts and global inequality - not as isolated islands, but as networked actors in a global educational movement for sustainable development.

Katharina Lingenaus is the coordinator for digital teaching and learning programs at the Virtual Academy of Sustainability (VAS) at the University of Bremen. Her work focuses on the planning, development, and implementation of digital courses on the topic of education for sustainable development (ESD). Since 2012, she has been responsible for several national and international research projects on digital education in the field of ESD. In addition to a large network of partner universities in Germany, the VAS has also been an active member of the Goethe-Institute's International Digital Network University since its foundation.

New paradigm thinking and skills need new forms of education – examples from the University of Freiburg

Elke Fein

Humanity is at a tipping point and so are many of our systems. Worse so, we might be at the edge of our own (self) destruction. The currently still dominant, modern, late modern and post-modern paradigms of thinking and acting have either co-created the challenges we are facing today (late/modern) or are unable to come up with considerably more adequate, radically new solutions (post-modern) to face these.

Both our academic/educational and our political and socio-economic systems are products of the modern and postmodern paradigms, while what we need is a holistic, metasystemic view that understands the interconnectedness of all aspects of life as a basis for sustainable and long-term thriving of all species on planet Earth.

It is time to take Einstein's famous quote seriously that "We cannot solve our problems with the same thinking we used when we created them". Hence, many might be curious about a paradigm shift in education to prepare and to fully understand what is at stake, to radically change priorities from material growth and consumption to a more holistic approach, including the inner development of us, humans, or at least of anybody already interested or prepared to engage in more serious personal transformation.

The possibility to train young people to grow in at least the five dimensions proposed by the Inner Development Goals (IDGs) framework, is a path to achieve the UN Sustainability Goals (SDGs). We can socialize them into a new, holistic paradigm of being, thinking, relating, acting and cooperating.

So how can higher Education embrace more profoundly transformative approaches?

This presentation and workshop proposes fresh perspectives as to how new paradigm holistic thinking can be designed into higher education courses. Examples from a course in integrative conflict management taught at the Center for Key Qualifications at the University of Freiburg illustrate possible avenues for whole person learning that include the dimension of inner development as a crucial element for bridging the knowing-doing gap.

The course offers action learning around deep listening, perspective taking, personal development and awareness of subtle dimensions of both one's own personal and collective consciousness, in view of making constructive uses of these skills in the context of civic engagement and in service of more participatory and integrative forms of deliberation and governance.

Dr. **Elke Fein** is a social and political scientist and a lecturer at the University of Freiburg's Center for Key Qualifications. She holds a PdD in Russian Studies. Her academic focus is on large scale socio-political transition processes, leadership and political culture, using adult developmental and integral approaches. She is also the co-founder and managing director of the Institute for integral Studies (IFIS) in Freiburg/Germany. She has initiated and coordinated the EU-funded "Leadership-for-transition (LiFT)" project (2013-2022), which explored holistic innovations to leadership and politics based on integral and meta-modern ideas across Europe. She is the main author of the book "Foundations, Principles and Inspirational Resources of Integral Politics" (2023). Elke is currently building up a School for Integral Politics as a space for learning and experiencing a new, holistic/integral paradigm of doing politics. Contact: fein.elke@gmail.com, www.ifis-freiburg.de

From Reflection to Action: Youth Participation and Democratic Methods in Higher Education ESD

Phillip Gutberlet – Jeanine Marie Rühle

youpaN, the German Youth Panel for Education for Sustainable Development (ESD), is an officially recognized body within Germany's national ESD process. As a youth-led initiative, we work to ensure that the voices of young people are not only heard but actively shape the future of education. Our mission is twofold: to strengthen meaningful youth participation in the development and implementation of ESD, and to advocate for ESD as a guiding principle throughout all areas of formal and non-formal education. Rooted in the UNESCO framework and supported by national structures, youpaN represents a unique model of institutionalized youth engagement in sustainability governance.

Idea and Aim

This interactive workshop explores the crucial interplay between democracy and ESD, with a particular focus on meaningful youth participation in decision-making processes. Grounded in the understanding that participatory engagement is both a democratic right and a transformative educational principle (Deutsche Gesellschaft für Demokratiepädagogik 2024), the session links conceptual input with active, experience-based learning.

We begin with a short input on the interrelation of democracy, participation, and ESD. This connection is increasingly recognized in academic and policy contexts – for instance, in the 2025 theme of the German Forum Political Education and ESD (“Political Education: Sustainability: Transformation”), which frames sustainability as a fundamentally democratic challenge (Forum politische Bildung & BNE, 2025). As Nohl (2024) argues, ESD must foster political judgment, civic responsibility, and collective reflection to remain transformative in the face of global crises.

The core of the workshop consists of trying out participatory methods first-hand, not just as abstract tools, but as active means to reflect on the congress itself. Participants are invited to engage with selected methods as a way to critically revisit their own congress experience, question dominant narratives of sustainability, and explore their own positioning within ongoing discourses. This process creates a reflexive space within the event, allowing participants to slow down, step back, and analyze what they have learned, felt, and (perhaps unconsciously) assumed.

The methods applied are:

- Peripatetic Learning: Enables walking conversations that open up reflective dialogue in motion (LMU München 2024a).
- Mystery Method: Uses guided problem scenarios to promote systems thinking and contextual analysis (LMU München 2024b).
- Positioning Game: Makes individual values and perspectives visible through physical positioning and debate (LMU München 2024c).

Rather than completing each method in full, participants will get a sense of their structure and potential, while also receiving materials for future adaptation in educational or institutional practice (LMU München 2024d; netzwerk n 2024).

Reflection is not an add-on, but at the heart of the process: through participatory methods, learners revisit congress themes, identify contradictions, and recognize themselves as part of the broader discursive space of sustainability. In doing so, the workshop fosters democratic competencies and invites participants to actively shape how sustainability is understood, communicated, and lived.

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Phillip Gutberlet is studying for a B.Sc. in Human and Environmental Studies in Landau. He is active in youpaN and co-founder the Klimabildung e.V.

Jeanine Marie Rühle is currently pursuing an M.Sc. in Sustainability Science at Leuphana University, following degrees in Special Education (B.A.) and Educational Science (M.A.). She is an advocate for Education for Sustainable Development (ESD) and youth participation, serving as a member of youpaN, a youth panel promoting the implementation of ESD in Germany. She is also the German Youth Focal Point for the UNECE Steering Committee on ESD and a jury member for the National ESD Prize of the German UNESCO Commission. Through her role as UNESCO Chair Student Representative, she aims to support students passionate about ESD and foster collaboration between UNESCO Chairs. Through her role, she aims to empower learners passionate about ESD and connect efforts across the ESD network and beyond.

stream 4 – ESD and Whole-Institution Approach

Reflections on a Hopeful Vision of ESD in Universities at a Time of Existential Threats

Zulfi Ali

1. In the Habermas-inspired slogan popularized by Richard Rorty – ‘take care of freedom and truth will take care of itself’ – independent and free universities play a central and critical role in leading to beliefs that are justified to the widest possible audience. Rowan Williams frames the role of universities as, promoting ‘intelligence in public discourse’. Arguably then, universities have a key role in shaping informed discussions about the contemporary human-induced polycrisis, and in helping us contemplate better presents and futures by addressing the challenges through education for sustainable development (ESD).

2. In this paper I will argue that for the most part universities are not rising to this challenge, and therefore not playing a role in ‘taking care of freedom’ through ESD. There are at least three ways in which this is happening.

2.1. One, by ignoring historically informed critical analyses of international development, based on political economy, ESD today is de-politicized, de-radicalized and disconnected from structural drivers that shape the world. This is most evident in the largely uncritical acceptance of the Sustainable Development Goals (SDGs) as a framework, instead of grappling with some fundamental questions interrogating the colonial origins of the asymmetries of power between the Global North and South,

and the growing imbalances within the global architecture of decision making. ESD is lagging in encouraging conversations around questions like; what is it in the shallow and largely unsuccessful histories of international development that gives us the confidence to base all our faith in the current system? what prevents us from learning lessons from colonialism? why are we unable to realize that the world looks very different when viewed from the perspective of what Antonio Gramsci referred to as the 'subaltern'? and why are we not systematically challenging the same single tragic story that we are told over and over again about the Global South?

2.2. Two, because of the way academia is structured, instead of moving towards a holistic pedagogical approach, the field is becoming increasingly fragmented, splintering into subject specialisms that further compartmentalize knowledge, competing with rather than complimenting each other. This fragmentation into many educations – such as the variations on Education for Sustainable Development; Global Citizenship Education; Peace Education; of synergies and building of a coherent educational movement.

2.3. Three, as recent events have clearly demonstrated, by crushing political and social activism, universities are increasingly neglecting their role in creating radical thinkers that are prepared to act on real world issues. This follows nearly four decades of neoliberal engineered apathy, democratic disengagement and decline in student activism. Spaces on campus to encourage and nurture engagement and activism are limited and shrinking.

3. To inject some real hope into the role universities can play through ESD, I suggest three broad possibilities for a way forward:

3.1. One, I argue that ESD in universities needs to be informed by political economy, both historical and contemporary, in a much more significant way and this needs to be done as part of a holistic analysis. Better understandings of the historical trajectories of international development will help ESD become more relevant. This will also allow us to be bolder, more critical and radical, but also more balanced in our analysis.

3.2. Two, ESD needs to be developed in frameworks other than the SDGs. Frameworks are neither neutral nor benign. They hide some things and highlight others. In contrast to the SDGs, the Earth Charter presents a much better framework for development: it is driven by values; it is conceived as a bottom-up people's movement; it respects and incorporates voices from the Global South as well as voices from a variety of worldviews; and it is built on solidarity. The EC will allow us to tell multiple stories: stories that acknowledge the role of power asymmetries in the global architecture of decision making; stories from the perspective not just of the victors, but those who were and continue to be dominated and subjugated in different ways; and real stories of hope.

3.3. Three, ESD needs to be taken out of lecture theatres and seminar rooms and actively encourage action for hope. After all, we know that without an actively participating young population, rapid change on the scale that is required is unimaginable. Based on my experiences of an ongoing project in a university in the UK over the past eight years, I believe 'critical pedagogy' (CP) can offer a way forward. Using praxis – theory informed action – as a central part of education, CP can help us put peace, and social and environmental justice at the heart of education. It can help us see education and activism as intertwined, not separated.

Zulfi Ali is a Senior Lecturer at the Faculty of Arts, Humanities and Education, Canterbury Christ Church University. He is an academic activist with a background in international development, with over two decades of field experience in South Asia, specializing in peace, human rights, and social and environmental justice education, and activism. His research experience and interests lie at the intersection of these specialisms, along with postcolonial histories of educational developments.

The ORANGE Framework – Implementing Holistic Sustainability in Higher Education

Julia Krause

Sustainability in higher education requires more than environmental initiatives — it calls for a cultural and systemic transformation that connects all parts of the university. The ORANGE Framework provides a simple yet powerful tool to understand and implement sustainability holistically across institutional structures.

Described in the book “Vom Green Campus zur ORANGE Alma Mater”, the model translates complex sustainability goals into six interconnected dimensions: Orientation, Research, Alliance, Networks, Governance, and Education. Together, they create a bridge between vision and practice — linking academic disciplines, administrative processes, and human engagement.

The ORANGE Framework is an invitation to action: to rethink how universities can become living ecosystems of sustainability. By showing how everyone — from students to leadership — can contribute meaningfully, the framework helps break down barriers, foster participation, and turn awareness into transformation.

Prof. Dr. **Julia Krause** is Professor of International Industrial Sourcing & Sales at HTW Dresden – University of Applied Sciences. With academic roots in both economics and educational sciences, she explores how holistic sustainability can be implemented across business and education. Her research bridges corporate practice, global supply chains, and creative organizational and teaching approaches. Before entering academia, she gained extensive experience in international management consulting and plant engineering. As an author and speaker, she advocates linking sustainability, systems thinking, and education as key drivers of systemic transformation.

Transforming Teaching and Learning across Higher Education Institutions: Whole of Institution Approaches Towards Sustainability

Blane Harvey – Daniel Fischer – Stephanie Leite – Claire Grauer

Transforming educational practices at higher education institutions (HEIs) to address urgent sustainability challenges not only requires a rethinking of the instructional content and pedagogical design, but a deeper and more holistic reimagining of the purpose and process of learning in the Anthropocene. This includes recognizing how values, worldviews and emotions shape our engagement with these challenges (Leichenko & O’Brien, 2020), engaging in knowledge co-creation that spans disciplinary and epistemic boundaries (Freeth & Caniglia, 2020), unsettling the roles of teachers and learners to acknowledge the co-learning that needs to be occurring by all (Piazza et al., 2024), and engaging learners in concrete responses to these crises (Deskin & Harvey, 2023). To take up this challenge, HEIs must adopt more systemic approaches to sustainability education, engaging across disciplines, fostering cross-campus collaboration, and indeed extending those partnerships beyond the campus into wider social arenas (Phillips & Howard, 2024; UNESCO, 2022). In many cases, this will require support for learners and educators alike to build their understanding of sustainability and develop related competences (Rieckmann, 2012).

In many countries, including Canada and Germany, initiatives aimed at supporting course design, or pedagogical practices, reflect efforts in this direction. However, despite clear calls to action and a growing number of initiatives aiming to act upon them, efforts to work collectively in cross-campus initiatives at HEIs have been described as “an enduring challenge” (Bardecki & Millward, 2020: 399); in addition, the extent to which these initial efforts reflect the kind of transformative rethinking that many have called for remains largely unexamined. This leaves open to question what these whole-of-institution initiatives do, whether and how they have been impactful, and what conditions have enabled or constrained their impact and continuity. As a result, HEIs taking a campus-wide approach

to embedding sustainability teaching, face limited evidence on the conditions that allow initiatives to emerge and thrive—or lead them to fail.

The aims of this session are two-fold:

- First, we will share insights on one whole-of-institution approach to transforming HEI teaching for sustainability, and an assessment of its impacts. This will focus on the case of McGill University's Sustainability Education Fellows program, an initiative dedicated to course (re)design for sustainability, which is currently in its third year of operation and recently undertook a utilization-focused evaluation (Patton, 2012).
- Second, we will set out a proposed agenda for learning beyond individual case studies, to understand the global landscape of whole-of-institution approaches to teaching sustainability in higher education. This work, being undertaken collectively by Leuphana and McGill Universities in conjunction with sustainability education networks in both Europe and North America, offers an opportunity to understand the interplay between the design and implementation of these initiatives and the institutional and socio-political contexts in which they are embedded.

Key findings that will be shared through this session highlight the added value of interdisciplinary and collaborative learning that engages both faculty members and students in design processes, the ways that institutional agenda-setting must align with bottom-up community initiative, and the ways funding modalities shape what is possible within these initiatives. We will also propose priorities for future research and international experimentation that might address key knowledge and practice gaps. These insights will be of interest to higher education administrators, educational scholars, sustainability educators alike.

Dr. **Blane Harvey** is an Associate Professor and William Dawson Scholar in the Department of Integrated Studies in Education at McGill University (Canada), where he leads the Leadership and Learning for Sustainability Lab. He is an interdisciplinary scholar whose work spans across the social and natural sciences on the themes of learning, collaboration, environmental change and education for sustainable development. Dr. Harvey's research investigates how climate change knowledge is produced, validated and communicated, and how facilitated learning and knowledge sharing can advance climate justice and support action on climate change, especially within communities most vulnerable to its impacts. He serves as an Associate Editor for the journal *Climate and Development* and Subject Editor for the journal *FACETS*.

Stephanie Leite is a PhD Candidate at Department of Integrated Studies in Education at McGill University (Canada). Her research focuses on transformative climate change education.

Towards a Systemic Policy Framework for Whole Institution Approaches to Sustainability in the UNECE Region

Jorrit Holst – Judith Klein – Jan Činčera – Niklas Gericke – Dafna Goldman –Mandy Singer-Brodowski – Aravella Zachariou – Arjen Wals

Objective, Methods, Findings and Significance

Whole Institution Approaches (WIA) emphasize the relevance of systemic learning and action towards sustainability. In light of current grand challenges (e.g., climate and biodiversity, democracy and citizenship, health and wellbeing), the WIA offers an approach to move from ad-hoc and additive sustainability projects towards a more integrated and interconnected co-design and experience of sustainable futures within (higher) education (e.g., Sterling, 2004, McMilling & Dyball, 2009). While the conceptual characteristics of WIAs have been outlined (Gericke, 2022; Holst, 2023; Wals & Mathie, 2022), and studies have assessed its effectiveness (e.g., Holst et al., 2024; Torsdottir et al., 2024), there

is little research to date on what policy environments would be effective in enabling and supporting WIAs across different national contexts.

Considering that such systemic embedding would be critical to achieve the objectives set with the WIA (e.g., UNECE, 2022), we, an expert group commissioned by the UNECE Steering Committee on ESD, chaired by Arjen Wals, are working on a multi-step process to developing a strategic policy framework for WIAs in the UNECE region. As part of this, we map the current policy landscape, analyze available peer-reviewed literature and conduct a three round Delphi study with stakeholders from policy-making, administration, academia, educational practice and civil society. As a first heuristic to map relevant policies, we use, adapt and expand dimensions proposed by Wals and Jickling (2008) to identify possible manifestations or, rather different contexts, in which a WIA can be positioned. This approach allows for an assessment of different policy-environments, for example, that in some countries, regions or communities, the governance mechanisms and culture may be more hierarchical and prescriptive in nature while in others, it may be more egalitarian, participatory and open. Such an analysis of the contextual background is of relevance for how a WIA is conceived in policy and practice, as well as for how it can be best developed, assessed and supported.

The proposed workshop outlines first results from the mapping of the policy-landscape, review of relevant international literature, and the first two rounds of the international Delphi study. Based in the presentation, we would like to discuss with participants first draft components of the strategic policy framework for WIAs in the UNECE region in a workshop format.

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Jorrit Holst is a sustainability researcher and policy advisor at Freie Universität Berlin. At the intersection of sustainability science, empirical social science, and educational science, his research

examines the systemic integration and practice of sustainability in formal and informal education and learning. Amongst others, he currently leads the work on Whole Institution Approaches (WIAs) to sustainability as part of the German National Monitoring on Education for Sustainable Development (ESD) and the conceptual and empirical research on cultures of sustainability in higher education as part of the KuNaH consortium. He is also a member of the UNECE Expert Group on WIAs, which is tasked with the development of a systemic policy framework for WIAs in the UNECE region.

Judith S. Klein is a Human Geographer, author, policy advisor, educator and public speaker, specializing in the intersection of policy and research. With over 20 years' experience in global development, she has worked across civil society, policymaking, humanitarian fields, and social movements. Now based at the Norwegian University of Life Sciences (NMBU), she coordinates the UNECE project on Whole Institution Approaches to Sustainability, developing an international policy framework to embed sustainability across education systems. She has played a key role in integrating sustainability into Norway's national curricula and has led and facilitated numerous international processes, including SDG 4.7 on Education. Klein also serves on Norway's Advisory Board on Ethics in the Teaching Profession. In her doctoral research she explores how sustainability (ESD) and global citizenship (GCED) are integrated into education systems worldwide.

Students as Multipliers for Education for Sustainable Development at the University of Hildesheim

Clara Wiese – Sarah Gaubitz – Katalin Kuse

This presentation examines the transformative potential of students as multipliers for Education for Sustainable Development (ESD) in higher education. As a good practice example, it focuses on the project *Your Goal – Your Action* (YGYA), based at the Green Office at the University of Hildesheim since 2019. Established as one of the first Green Offices in Germany, the Hildesheim office serves as a hub for student engagement and institutional change.

As the largest stakeholder group at the university, students possess both the motivation and the innovative capacity to co-shape their educational environment and engage in social and political participation. Particularly in interdisciplinary settings, students demonstrate the ability to develop creative and resilient responses to complex, so-called “wicked problems.”

To unlock this potential, it is essential to address the structural and practical barriers students face when engaging in sustainability-related initiatives. These include a lack of accessible contact persons – especially for cross-disciplinary projects – limited knowledge in project management (e.g., acquiring funding or reaching target audiences), and insufficient access to institutional and external networks. Although interest in sustainability is high, many students struggle to find realistic entry points into such a complex topic, which can diminish their sense of agency and lead to frustration.

To address these challenges, the Green Office at the University of Hildesheim launched *Your Goal – Your Action* (YGYA) in 2019, an education and consulting program for all students, funded initially by the German Federal Environmental Foundation (2019–2023) and currently supported through academic quality improvement funds (2023–2026). YGYA empowers students to develop and implement their own projects related to ecological, social, and cultural dimensions of sustainability and the UN's 17 Sustainable Development Goals.

The program provides a broad range of support, including personalized advising, e-learning modules on sustainability, project management, and intercultural teamwork, as well as interdisciplinary seminars, workshops, exhibitions, public talks, and a digital project catalogue. YGYA also fosters internal networking and collaborative learning opportunities beyond the university.

This presentation will introduce the Green Office model, illustrated by the pioneering example from Hildesheim. Furthermore, it will highlight selected student-led projects – from lecture series on climate justice, to strengthening biodiversity on campus, to Slow Fashion Week – particularly those rooted in a

Whole Institution Approach, where students, academic and non-academic staff collaborated as partners. It will also outline factors that increasingly hinder active support for sustainable development by all university members and discuss which developments need to be counteracted in the future.

As an outlook, the presentation highlights further developments with a focus on Futures Literacy. New partnerships within the University of Hildesheim, such as between the Green Office and the Institute for Primary School Didactics and General Studies (IGuS) aim to anchor future skills across disciplines. Through innovative learning formats, skills such as critical future analysis, creative thinking and the development of alternative courses of action, students and staff are empowered to engage with future challenges and to shape sustainable transformations within and beyond the university.

By showcasing both successes and challenges, this presentation provides critical reflection and practical impulses for strengthening student engagement and the institutional integration of ESD in higher education.

Clara Wiese studied cultural studies and aesthetic practice as well as cultural mediation at the University of Hildesheim. During her studies, she realised film and theatre projects, including as a performer and set designer. Since 2022, she has been working at the Green Office of the University of Hildesheim, coordinating the former DBU project *Your Goal - Your Action* and the Green Office's public relations work. In 2024, she co-coordinated the Erasmus+ project *ATTUNE - Activate the University for Climate Change* for the University of Hildesheim. She is an IHK-certified transformation manager for sustainable culture and works as a freelance consultant on this topic.

Sarah Gaubitz has been a Professor of Didactics of General Studies at the University of Hildesheim since 2024. Previously, she was a junior professor at the University of Erfurt and the Ludwigsburg University of Education, as well as a substitute professor at the University of Siegen. She studied to become a teacher at primary/secondary schools at the University of Hildesheim, received her doctorate from the University of Osnabrück in 2018, and worked in the school system for several years. Her research focuses in particular on value formation, education for sustainable development, and conceptual approaches to social learning in general studies.

Katalin Kuse is a Sustainability Officer at the Green Office, University of Hildesheim. Previously, she managed projects funded by the German Federal Ministry for the Environment, focusing on sustainable lifestyles, regional transformation and digital innovation in sustainability. With degrees in Environmental and Political Sciences (Leuphana University Lüneburg), Intercultural Philosophy of the Arts, and Creative Writing (University of Hildesheim), she draws on an interdisciplinary background. Her work focuses on driving systemic change that strengthens agency and enables meaningful collective action within academic communities. As part of the coordination team of the Lower Saxony university network "HochNiNa", she is committed to cross-institutional collaboration and policy-level transformation towards sustainability.

Co-Creating Sustainable Futures: Higher-Education Students as Co-Designers in Transformative Sustainability Education as an Everyday, Embodied and Relational Practice Project

Janbee Shaik Mopidevi – Agnes Zenaida Camacho

This qualitative study examines how higher-education (HE) students function as co-creators in Education for Sustainable Development (ESD) projects and the resulting impact on their sustainability competencies, agency, and professional identity. Drawing on student reflective questionnaires, critical reflection essays, and reflective photo essays from nine students enrolled in Global Project and Change Management at Windesheim University of Applied Sciences who participated in the Innovate Teaching Research & Advocacy Consulting (ITRAC, Global) program's "Transformative Sustainability Education as

an Everyday and Embodied Relational Practice,” the research spans two academic years (2022–2023, 2023–2024).

Grounded in epistemic diversity and relational epistemology, the study treats sustainability as co-constructed, situated practice enacted through everyday interactions, material engagements and social relationships. Vygotsky’s sociocultural theory highlights social mediation, cultural tools and the Zone of Proximal Development, showing how peers, mentors and stakeholders scaffold learners toward greater competence and agency. Krishnamurti contributes an inward, reflective strand—choiceless awareness and self-inquiry—those surfaces assumptions, deepens ethical sensitivity and sustains intrinsic motivation. Tagore’s holistic humanism and nature-centered pedagogy foreground embodied, place-based learning through sensory, aesthetic and community rhythms that anchor systems thinking in lived experience.

Guided by socio-cultural and transformative learning theories, thematic analysis revealed six core themes: (1) intrinsic motivation and value alignment; (2) development of systems-based sustainability competencies; (3) stakeholder-engagement barriers and strategies; (4) emphasis on early-education pedagogies; (5) transfer and application of competencies beyond the classroom; and (6) collaborative governance structures. Participants—entering with strong sustainability commitments—reported marked gains in systems thinking, strategic foresight, values articulation, and interpersonal facilitation through co-designing research methods, facilitating focus groups, and drafting advisory reports. These outcomes align with UNESCO’s ESD for 2030 and OECD’s Education 2030 competency frameworks.

Despite significant gains, students faced challenges—language barriers, scope ambiguity, and parental resistance—that they navigated via proactive networking, reflective debriefs, and adaptive facilitation, cultivating relational trust. Leading co-creation sessions corresponded with higher engagement and ownership. However, inconsistent competency transfer into leadership courses, community research, or advocacy highlights the need for structured reflection, micro-credentials, and alumni networks.

Integrating Vygotsky’s socio-cultural theory, Lave and Wenger’s communities of practice, and Mezirow’s transformative learning, the study proposes a five-stage Relational Co-Creation for Competency Development Framework™ as a key contribution: (1) socio-cultural scaffolding; (2) relational co-creation; (3) disorienting dilemmas; (4) competency transfer pathways; and (5) institutional governance supports.

By empirically validating co-creation as a catalyst for deep engagement and skill formation, this study offers actionable design principles and policy recommendations: embed co-creation from project inception, formalize multi-stakeholder governance, integrate continuous reflective practice, and implement longitudinal tracking of graduate competency outcomes. Aligned with whole-institution approaches (AASHE STARS, Eco-Schools, THE Impact Rankings), the framework provides a replicable roadmap for empowering HE students as architects of sustainable solutions.

This theoretically grounded and practically oriented framework recommends embedding student-led co-creation from inception, formalizing multi-stakeholder governance, integrating continuous structured reflection, implementing micro-credentialing tied to verified practice, and establishing longitudinal competency tracking to advance sustainability as an everyday, embodied and relational practice in higher education.

“The Relational Co-Creation Framework is a trademarked, proprietary framework of ITRAC™; and authors retain rights to publish findings under agreed terms.”

Dr. Janbee Shaik Mopidevi is a lecturer, researcher and consultant with over 15 years’ experience in transformative curriculum design and Education for Sustainable Development. She specializes in relational pedagogy, co-creative participatory methods and interdisciplinary qualitative research spanning higher education, early years, NGOs and government. As Founder and Principal Consultant of Innovate Teaching Research & Advocacy Consulting (ITRAC, Global), Academy for Sustainable Co-Creation, she designs and delivers workshops, policy advisories and co-design projects that strengthen family–school partnerships and whole-institution sustainability practices. She serves as an external

examiner and ESD subject expert, mentors higher-education students as co-researchers and co-designers, and peer-reviews international journals. Her work combines curriculum innovation, stakeholder engagement and measurable impact to scale competency-based approaches for student wellbeing and competency development.

Agnes Zenaida Camacho is a lecturer at the Global Project and Change Management (GPCM) bachelor's degree program of Windesheim Honours College/WUAS, The Netherlands and Editor in Chief of *Glocality*, an international, multidisciplinary undergraduate academic journal of GPCM, published by Ubiquity Press. Her research and advocacy interests focus on issues concerning child protection, children's participation, child work, labor and migration, psychosocial support in disasters and armed conflict, and religion, conflict, and human rights. A central theme in her work is the conceptual autonomy of children and childhood, recognizing children as active agents in their own lives, embedded in relationships of interdependence and reciprocity. A key competency is facilitating learning and building meaningful connections with local communities, organizations, and grassroots activists leading transformative change. Much of what Agnes knows she has learned from her mentors, from listening to stories of survivors, and the wisdom shared by community leaders, both young and old, across diverse backgrounds and experiences.

Bridging Perspectives: How can status groups collaborate towards a Whole-Institution Approach?

Tim Brauer – Lee Heinlein – Andra Krogmann – Marieke von Elert – Jonas Weitzel

Our workshop wishes to illustrate the importance of (and ways to) inter-group understanding and collaboration aiming for the implementation of a Whole-Institution Approach (WIA) for institutional transformation.

Since the WIA is the most promising way to achieve transformative socio-ecological changes at institutions and in society, it needs to be implemented as productively and effectively as possible. Participation, dialogue and cooperation across university status groups strengthen its workings (Disterheft et al. 2015; Holst 2023; Leal Filho et al. 2019), so cross-group collaboration is the key objective in our workshop. In particular students take a key role for successful transformative processes as a numerous and pro-active group of “central shapers of sustainable development”, so-called “change agents” (BMBF 2017; Drupp et al. 2012; Singer-Brodowski 2019; Wihlenda 2015).

Netzwerk n has long been supporting students and student groups in their work towards more sustainable universities. This has given our organization a wealth of in-vivo experience throughout all of Germany's higher education network concerning whole-campus sustainability. One of our central and most distinctive projects—Wandercoaching—has been initiated and continuously developed for that purpose and is currently being re-invented to actively include further status groups.

Our workshop will start with an overview and deep dive into different status groups or roles that members of any university can hold or belong to, in order to gain insight into their perspectives. Netzwerk n's extensive good practice collections will facilitate this clarification and supply hands-on examples of partly or all-out successful collaboration across several or all status groups involved. We will then take an exemplary case from among the participants to interactively illustrate how to make use of the various status groups' strengths and weaknesses in order to achieve success in the given case, spinning a literal net among the various stakeholders in our scenario. Finally, we will collect generalizable learnings and tips for the participants to take with them towards their home university transformation projects.

Our workshop will be based on design thinking methodology. Participants are not required to belong to any specific university status group. Readiness for empathy and participation in our interactive workshop methods are requested of them.

Marieke von Elert currently works at netzwerk n e.V. on the project 'Future Forum for Climate-Friendly Universities' (funded by BMW), where she supports universities in the development and implementation of climate protection concepts. She studied psychology with a focus on environmental psychology in Mainz and Magdeburg (M.Sc.).

Lee Heinlein is coordinating the german funded project "future forum climate friendly universities" (BMW), working for netzwerk n e.V. Before, Lee worked 5 years as coordinator for ESD for the city of Münster after finishing their M.Sc. in "Sustainability Science" at Leuphana Lüneburg.

Andra Krogmann works on empowering students as part of the project "future forum climate friendly universities" (BMW). Since joining the WanderCoaching program, she has conducted several training courses in the field of ESD. She completed her studies in Liberal Education (B.L.A.) at Leuphana University Lüneburg, specialising in socio-ecological transformation.

Jonas Weitzel is a master student in Sustainable Transformation Design at Münster University of Applied Sciences. He works on projects in international collaboration, social entrepreneurship education, and circular value creation. He was recently trained as „Wandercoach“ by netzwerk n and is drawing on his experience as a professional basketball player.

Tim Brauer studied Business Administration (B.Sc.) at CAU Kiel and is currently completing a master's degree in Sustainable Business Management at the University for Sustainable Development Eberswalde. He was also trained as a „Wandercoach“ by netzwerk n and helped shape the coaching training program in the following years.

Transformative Curricula as Drivers for Organisational Change: The Transformation Module at Leuphana University Lüneburg

Lina Bürgener – Daniel Fischer – Laura Picht-Wiggering

Universities are key actors in shaping sustainable futures; hence, curriculum transformation plays a central role in the process of structural and cultural transformation within institutions, as it links teaching, institutional identity, and societal engagement. Especially when it comes to education for sustainable development (ESD) and socio-ecological transformations, universities face the challenge of keeping curricula dynamic and relevant in the face of complex and shifting societal crises. This contribution presents the Transformation Module at Leuphana University as an example of how ESD-based curriculum innovation can serve as a strategic lever for whole-institution change—promoting both inner development and outward societal impact.

The Transformation Module—as one of the three interdisciplinary modules in the Leuphana Semester at Leuphana University Lüneburg—invites all first-semester students to explore complex societal transformation processes across their disciplines. Through a combination of interdisciplinary input, dialogical engagement, and project-based collaboration, students learn to critically and constructively shape change. The module foregrounds current and controversial transformation issues—such as climate justice, digitalization, democracy, or post-growth—and challenges students to develop their capacity for orientation, judgment, and action in the face of societal uncertainty and growing complex sustainability challenges.

In the module, students analyze fundamental questions of societal change processes and responsible action in the 21st century in the context of sustainable development. They critically examine both historical developments and current conditions, discuss questions about societal coexistence, and explore future-oriented solutions. In line with transformation research, they develop an understanding of historical, present, and future transformation dynamics.

To achieve this, the module is structured into three elements: (i) a comprehensive lecture, (ii) problem-oriented seminars, and (iii) reflective exercises.

(i) Lecture: The lecture introduces key concepts such as transformation, values, justice, and responsibility, and provides theoretical and historical grounding for the analysis of social-ecological change. Students are encouraged to reflect on different forms of justice, value change, and the roles of individuals and society, as well as science, politics, and business in transformation processes.

(ii) Seminars: The design-oriented seminars allow students to work on concrete transformation issues using research-based learning methods. Through interdisciplinary and transdisciplinary perspectives, they collaboratively develop research questions and present results at a university-wide conference.

(iii) Exercises: here, students deepen their understanding of specific concepts and societal contexts and practice and develop academic writing as well as critical thinking skills. By challenging assumptions and engaging with different worldviews, students cultivate reflexivity and normative orientation.

The combination of these elements should enable students to critically and reflectively interpret societal transformation processes, classify them according to their origins and dynamics, and help shape them to achieve desirable outcomes. It also contributes to the learning objectives for the Sustainable Development Goals and to the goal of a more comprehensive global citizenship education in higher education. What sets it apart is its dual function—not only as a learning space for students but also as an organizational lever for change. Over the last 20 years, the Transformation Module (or its predecessors) has contributed to embedding sustainability across the university by:

- acting as a visible and integrative curriculum element shared by all undergraduate students, regardless of disciplinary affiliation;
- establishing sustainability and societal relevance as key reference points in teaching content and didactics;
- providing a platform for transdisciplinary cooperation between faculties and with external partners;
- prompting institutional reflection on governance, mission, and the role of universities in times of transformation.

The Transformation Module demonstrates how curriculum transformation can foster institutional change and support reflexivity, cross-disciplinary cooperation, and a culture of responsibility as a shared and evolving learning space. Its long-term success lies in its adaptability and embeddedness. At the same time, it highlights key challenges: sustaining innovation, aligning governance structures, and responding to emerging discourses. Ultimately, the module exemplifies how universities can act as catalysts for sustainability—by enabling both inner transformation among learners and structural shifts within the institution, in line with the whole-institution approach.

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Lina Bürgener is a postdoctoral researcher at Leuphana University Lüneburg and coordinator of the “Transformation” module presented here at the conference. Her research focuses on sustainability education in higher education, with a particular emphasis on its integration into teacher training as well as the exploration of transdisciplinary teaching and learning.

Daniel Fischer is professor of Sustainability Education and Communication at Leuphana University Lüneburg, where he also holds the UNESCO Chair in Higher Education for Sustainable Development (ESD). His research explores how more sustainable ways of living and meeting human needs can be facilitated in education, with a special emphasis on Teacher Education. His current projects are on learning assessment, transdisciplinary learning interventions and capacity building in ESD leadership.

Dr. **Laura Picht-Wiggering** has since 2018 been the academic coordinator of the module “Problematizing science: critical thinking” in the Leuphana Semester and since 2025 of the module “Transformation” at Leuphana University Lüneburg. She originally studied archaeology but has now, through additional studies and long-term experience in interdisciplinary teaching and learning, turned her attention to higher education. In this field, she is now conducting research on the (content-related) design of contemporary higher education. Contact: laura.picht-wiggering@leuphana.de

A different approach to Learning: Johannes B. Ortner Academy for Sustainability and Transformation

Christian Holler – Georg Zollner

In March 2025 the first ‘Johannes B. Ortner Academy for Sustainability and transformation’ was organised by the University of Applied Sciences Munich (Hochschule München). Funded by the Johannes B. Ortner Stiftung the yearly 4-day workshop at lake Chiemsee in Bavaria brings together between 25 and 30 students from all academic backgrounds and is open for applications from all universities. The main goal of the workshop is an interdisciplinary experience which is not constrained by the usual university rules:

- we move away from the usual lecture room environment
- there are no exams and no credit points to earn
- it is organised during semester break
- we mainly teach in tandems
- several lecturers are involved, not only from universities but from companies, public sector, etc.
- students have to apply for a scholarship by sending in a motivation video or motivation letter and a cv
- the main criterion for a successful application is active engagement in the field of sustainability

The 4-day workshop included prominent speakers joining in person for two to three days, e.g. Prof. Dr. Harald Lesch from the LMU in Munich, the former politician and now manager of Deutsche Bahn AG Katrin Habenschaden, the founder of the Landbanking Group Dr. Sonja Stuchtey and the corporate and personality coach Swantje Benussi. In addition, Prof. Dr. Maja Göpel joined online. The workshop had an interdisciplinary organisational team: Prof. Dr. Christian Holler (Department of Applied Sciences and Mechatronics), Prof. Dr. Georg Zollner (HM Business School), Prof. Dr. Peter Dürr (Department of Social Sciences), Claudia Hutten (head of HM Sustainability Management) and students from the Student Green Office. Our call for applications in December of 2024 triggered the interest of more than 150 students across all of Germany, although the workshop does not provide any credit points towards their university degrees.

The interdisciplinary 4-day program started with intensive get-to-know exercises and an overview of future challenges. On the second day the main topic was understanding complexity and systems. The third day provided several best practice examples of transformation and an excursion to the German

Constitution Museum on the Herrenchiemsee island, which stands as an example for an exceptional historical transformation. On the last day students would present their own Game-Changer projects they had pitched and worked for during the three previous days. Also, the evenings provided programs like a sustainability Pup Quiz, a fireplace conversation with some of the prominent speakers and an exchange about Inner Development Goals. In general, the workshop consisted of about 50 % input and 50 percent interaction time. For the Charting New Horizons for Education for Sustainable Development conference we plan to present the academy motivation for organizing such an event, our own and the participants experiences during the 4-day workshop, its specific curriculum and its outcomes in connection with our university's sustainability goals as a best practice example for interdisciplinary Education for Sustainability.

Christian Holler is professor for engineering mathematics at the Department of Applied Sciences and Mechatronics at Hochschule München. He earned his PhD in experimental astrophysics at the University of Cambridge and later worked as a Postdoc at the University of Oxford. After moving to Munich his interest shifted to the topic of renewable energies. He has written two books, "Erneuerbare Energien – ohne heiße Luft" and "Erneuerbare Energien zum Verstehen und Mitreden", which was listed in the Spiegel Bestseller booklist for several months. In 2021, he has been nominated as professor for "Innovative Lehre" with the aim to further expand the interdisciplinary focus on sustainability and create new educational formats.

Studium Planetare: A Case Study for Student-Led ESD Education with and within Culture and Arts

Lili Hillerich - Lisa Hoffmann – Klasse Klima

How must teaching/learning transform if we are serious about a sustainable future?

Studium Planetare, a pilot project designed and implemented by the student-led initiative Klasse Klima at the University of the Arts Berlin (UdK), offers a daring example. Funded by the Stiftung Innovation Hochschullehre and embedded in the Studium Generale, the project develops and tests a climate-friendly, interdisciplinary curriculum with a focus on multi-modal topics in the scope of climate justice theory and practice. The program is not only situated at an arts and design university but actively implements artistic and designerly methods and strategies to shape the learning/teaching environment designed not only for students, but with them.

Studium Planetare, which has been running since April 2024, offers seminars and a lecture series over three semesters. The events are open to everyone. The goal of *Studium Planetare* is to comprehensively analyze the dimensions of the climate crisis in order to address one of the most pressing issues of our time in an interdisciplinary and collaborative manner. Students are given access to climate-friendly education as part of their studies. In addition, a space is created in which art and design disciplines can engage with socioecological challenges and options for action. New learning methods and extended concepts of knowledge beyond institutional teaching formats are tested in the courses.

A central claim is that the art and design disciplines must fulfill their ecological responsibility. The project aims to demand basic climate education for all and thus also emphasizes the fundamental nature of climate education. After the end of the project in 2026, *Studium Planetare* is supposed to be established in a long term perspective and serve as an example for other contexts.

This presentation offers a practice-based case study of *Studium Planetare*, highlighting how grassroots, student-led action can drive institutional change from within. Not only through seminars and the lecture series, but also through self-organization and the transgression of institutional boundaries, the project explores peer-to-peer learning, non-hierarchical knowledge transfer, creative and collaborative approaches to teaching complex ecological and societal challenges. The presentation argues for the necessity of democratizing academic structures to enable new forms of transformative education.

By addressing not only students but also administrative and academic staff and people outside of the university, the project advocates for a horizontal approach to learning — one that treats sustainability as a shared responsibility across the institution. Only if we can reach a broad spectrum of citizens, measures in the scope of ESD will be accepted and applied. We see arts-based education as a vital link for engaging wider publics in the climate discourse.

Art, historically, has served as both a voice for and a lens through which society reflects on itself — emotionally, imaginatively, and critically. We see arts-based sustainability education as a powerful means to engage wider publics where traditional academic discourse may fall short. Through the activities of the Klasse Klima as multipliers, ESD is transferred and anchored in society at large. Through our public-facing projects—ranging from exhibitions to publications and urban interventions — Klasse Klima and its participants act as multipliers, transferring ESD knowledge and practice into broader social contexts.

The presentation will feature insights into the organizational structures as well as the up-to-date outcomes. We aim to present both the methods and objectives of our work, namely: co-creative curriculum development, arts-based learning strategies, and climate literacy integration, as well as key insights into how these have been implemented at UdK. We will share examples of student-led seminars, interdisciplinary collaborations, and formats of public engagement, offering reflections on the challenges of navigating institutional resistance, sustaining participation, and translating experimental practices into long term structural change.

We join this conference to contribute to and learn from an international dialogue on ESD, particularly around participatory, democratic, and creative approaches in Higher Education. By reflecting on our process, we hope to inspire and be inspired by others working toward sustainable, participatory, and creative futures in Higher Education.

Klasse Klima is an open, autonomous and transdisciplinary collective. It communicates the climate crisis in art and design practice and education with a focus on issues of justice. Klasse Klima intervenes in educational politics and creates student-led seminars in art universities. Its name is a reference to the structure of UdK Berlin. Klasse Klima is made up of people from a wide range of degree courses and professions, which contributes to a diverse richness of expertise within the collective. As a result, the formats of the seminars and lectures are also very diverse and explore, among other things, the design of learning spaces. We therefore like to meet in gardens, forests, public spaces, kitchens, etc. and explore climate-related topics through artistic exploration, audio walks, picnics, ...

<https://klasseklima.org/>

Transforming Futures: Higher Education Practice for ESD and the whole-institution approach (WIA)

Isabel Toman – Daniel Fischer

As the world faces intersecting crises ranging from climate change to questions of truth, facts and ethical ways of coping with artificial intelligence, higher education as a provider of education, knowledge and as societal stakeholder is being increasingly challenged. The need to reimagine and reconfigure education systems has become ever more urgent. Education for Sustainable Development (ESD), as articulated in UNESCO's ESD for 2030 Roadmap (2020), seeks to empower learners of all ages with the knowledge, skills, values, and agency needed to shape more just, sustainable, and resilient futures. ESD is more than content: it is a transformative approach that reorients how education is designed, delivered, and assessed, positioning it as a foundational driver for achieving all 17 Sustainable Development Goals (SDGs).

The newly adopted UNESCO Recommendation on Education for Peace, Human Rights and Sustainable Development (2023) reinforces this vision by calling for systemic change in teaching and learning practices, grounded in equity, inclusivity, and ecological responsibility. In this context, higher education institutions (HEIs) have a critical role to play, not only as centers of learning and research, but also as change agents capable of modelling sustainability through institutional policies, operations, partnerships, and pedagogy. They can initiate and foster societal change through the actions of their graduates, faculty, staff and other community members.

Recognizing this potential, UNESCO, together with global experts, the International Association of Universities (IAU) and UNESCO Chairs, has developed and is currently piloting three interconnected guidance tools to strengthen the implementation of ESD within (formal) education systems. These tools focus on:

- Adopting a Whole-Institution Approach (WIA) for ESD: Encouraging institutions to embed sustainability principles across governance, curriculum, campus practices, research, and community engagement.
- ESD Pedagogies and Sustainable Competencies: Supporting educators to foster critical thinking, systems thinking, futures thinking, collaboration, and self-awareness in learners through active, learner-centered methodologies.
- Assessment for Learning in ESD: Providing guidance on evaluating not only knowledge acquisition but also changes in attitudes, values, and competencies relevant to sustainable development.

This interactive workshop invites conference participants to explore the practical application of the guidance tool on the whole-institution approach as an overarching concept, and ways to support institutional transformation in higher education. The session will briefly outline the conceptual and methodological frameworks underpinning the WIA toolkit, which was co-developed through an iterative, consultative process involving researchers, educators, and policymakers across multiple regions.

Participants will then learn about preliminary insights from ongoing action research projects in which the guidance tools are being piloted in diverse educational settings (including primary and secondary schools as well as HEIs). These action research pilots are expected to generate valuable knowledge about context-specific enablers and barriers to implementing ESD, while also serving as real-time experiments in fostering institutional change.

Isabel Toman is working as Senior Programme Officer for Sustainable Development at the International Association of Universities (IAU), based in Paris at UNESCO. Higher Education and Research for Sustainable Development (HESD) forms one of the four strategic priorities of the Association. Amongst Isabel's tasks at the IAU are the coordination of the IAU Global HESD Cluster, the preparation of the 4th IAU HESD Survey (to open in 2026), communicating with Members and partners, and creating content for the HESD Portal, as well as working on related events and publications. Before joining the IAU in 2019, she gained international experience during work placements in the higher education sector in Mexico and Germany. With a background in political science, international relations, and languages, her interests over the last years focused on ESD, whole-institution approaches and enabling systems with partnerships and structures for SDG implementation. Contact: i.toman@iau.global

Daniel Fischer is professor of Sustainability Education and Communication at Leuphana University Lüneburg, where he also holds the UNESCO Chair in Higher Education for Sustainable Development (ESD). His research explores how more sustainable ways of living and meeting human needs can be facilitated in education, with a special emphasis on Teacher Education. His current projects are on learning assessment, transdisciplinary learning interventions and capacity building in ESD leadership.

A University's Journey Toward Education for Sustainable Development Across All Disciplines

Markus Riederer – Anja Schlömerkemper, Julius-Maximilians-Universität Würzburg

This presentation shares insights from an ongoing process at Julius-Maximilians-Universität (JMU), Würzburg, as the university adopts a Whole-Institution Approach (WIA) to embed Education for Sustainable Development (ESD) across all degree programs.

Objectives

The primary objective of this presentation is to document and analyse how a large, multidisciplinary university can systematically align its policies, curricula, and governance structures to integrate sustainability as a cross-cutting, enduring responsibility within higher education, focusing on teaching and learning. The case also highlights how external drivers—such as the Bavarian Higher Education Innovation Act—and internal initiatives can converge to create a robust foundation for ESD implementation.

Methodology

This research employs a case study approach, encompassing:

- Systematic review of institutional and policy documents
- In-depth analysis of the formal requirements and policy frameworks for the design and development of study programmes
- Documentation and assessment of stakeholder engagement initiatives, including the evaluation of submitted proposals and resulting outcomes
- Examination of governance structures and decision-making

Key Findings

- Policy Integration: ESD can be anchored by aligning external mandates with internally driven actions.
- Curriculum Development: Ongoing revisions to teaching mission statements and module descriptions embed ESD aims and competencies, institutionalising sustainability within academic quality assurance and accreditation routines.
- Cross-Disciplinary Learning: Launching a university-wide virtual course, "Interdisciplinary Sustainability Sciences," will facilitate students' engagement with sustainability perspectives from all ten university faculties.
- Participatory Governance: Faculty, students, and administrative staff are involved through regular meetings and collaborative governance, fostering institutional ownership and innovation.
- Faculty Development: A tailored ESD-focused training programme supports the scientific and practical dimensions of teaching staff's pedagogical practice.

Significance

JMU's experience demonstrates that meaningful institutional integration of sustainability is attainable through a holistic, participatory approach. The case underscores how transparent communication and inclusive bottom-up engagement can reconcile faculty autonomy and disciplinary diversity with institution-wide development, making sustainability a permanent dimension of academic life. These insights may guide and inspire other higher education institutions on their journeys toward integrating ESD across their degree programs.

Markus Riederer is Senior Professor at the Sustainability Laboratory WueLAB of the University of Würzburg, where he leads initiatives in Education for Sustainable Development (ESD). Trained as a plant scientist, his research has focused on the biology of plant surfaces and their interactions with the environment, and he also served as Director of the University's Botanical Garden. He is a member of

the German National Academy of Sciences Leopoldina and the Bavarian Academy of Sciences and Humanities. In recent years, he has applied his expertise to advancing the transformation of higher education towards sustainability. Acting on behalf of the university leadership, he supports the curricular integration of ESD across all study programs and leads the development of a digital, interdisciplinary study program in sustainability sciences open to students from all faculties, as well as the initiation and co-design of a professional development program on higher education for sustainable development for university lecturers. In 2025, he coordinated the successful application that earned the University of Würzburg the National Award for Education for Sustainable Development conferred by the German UNESCO Commission and the Federal Ministry of Education and Research.

Fostering transformative change – using a guided multi-stakeholder process as an institutional strategy for embedding sustainability in Higher Education

Leonie Bellina, BelConsult – Sonja Kleinod, Hochschule Darmstadt

Higher Education Institutions (HEI) are tasked with integrating ESD across all disciplines and study-programs. However, proponents of this process find themselves embedded in a complex, living system, where institutional policies and processes, different stakeholders and interests, personnel in key positions with varied opinions on ESD, as well as disciplinary cultures and the demands on teaching staff, create a tangled web with enormous forces of inertia and hidden dynamics. Because ESD integration is usually moved forward by highly engaged individuals within this system, the risk of frustration and burnout is high. Add the project-focused structure of today's HEI, which usually finances only temporary efforts that are hard to continue when limited contracts and funding end, and you get a good sense why the integration of ESD into HEIs is not moving as fast and wide as is necessary in view of global and local challenges.

Darmstadt University of Applied Sciences (Hochschule Darmstadt, h_da) is attempting a Whole-Institution-Approach (WIA) to integrate ESD that addresses the above mentioned issues through a specifically designed process of systemic organizational development with an external ESD-consultant. It supports and strengthens the highly engaged individuals, and connects people and efforts across university-sectors to enable a more systemic approach to the systemic issues.

We began summer 2024 with bringing together a multi-sector core-team with members from governance, education, green office, administration, QM and management, to engage in a process of appreciative inquiry into the organization's sustainability-heritage: all the successful processes, projects, institutional change and key people related to Sustainable Development/ESD in past and present. Based on this positive core, we entered an iterative process of problem-definition, discovery, visioning & designing, action & delivery, and celebration, reflection and adaptation, over the course of 1,5 years. Members of the core team bring the ESD process into their respective areas of work, where they function as catalysts for transformation. In regular intervals, the core team meets in guided workshops to create ideas and options for their specific sectoral as well as the systemic issues. Together, they forge pathways for institutional transformation towards ESD in a participatory, multi-perspectival, multi-stakeholder process. The ESD consultant guides this process of organizational development with the core team, and also works in-depth with different stakeholder groups, for example with program directors on systematic curricular integration of ESD.

Bringing together key actors for ESD across sectors, coordinating existing efforts, and engaging in a constructive, systems-oriented process, is showing to be effective: by spring 2025, the core-team created a bottom-up-ESD-strategy that connects the different organizational perspectives and expertise, and complements the soon-to-be released sustainability strategy. By summer 2025, Hochschule Darmstadt succeeded in establishing a competence center for sustainable development that brings together new ESD-staff & the existing Green Office, sustainability management, and sustainability research, thus creating a permanent and independent location (and driver) for a WIA towards E/SD. Among many other measures, efforts for a sustainability-certificate, accessible to all

students, are under way; as is the creation of an „ESD-helpdesk“ for teaching staff, to provide individual methodological and content-related support to teachers willing to integrate ESD, and help ease their time- and resource-burden involved in doing so. By November 2025, we expect a number of study programs to have completed an ESD-analysis, visioning & strategy-process. The final step will be setting up processes for continued institutional learning and development for and as ESD.

A guided, multi-stakeholder process in an organizational-development framework addresses individuals, community, and system simultaneously. External expertise and moderation provide focus and accountability, while the core-team offers a space of support and creativity for ESD-enthusiasts as well as a space of learning and connecting for those newer to the topic, but important to the process. Our experience suggests that this approach may be a valuable institutional strategy for successfully embedding sustainability in Higher Education.

Our presentation will show

- the specific process of organizational development for ESD designed for Hochschule Darmstadt
- the structure of working with a multi-stakeholder core team of catalysts, plus in-depth in key areas for ESD-integration
- the results, learnings, and strategies developed over the (then) past 1.5 years

We aim to include different stakeholder voices and organizational perspectives to the presentation via recorded short video interviews.

Leonie Bellina is trainer, consultant, public speaker, and associate researcher at the “Internationales Zentrum für Ethik in den Wissenschaften” at the University of Tübingen.

Sonja Kleinod is the Head of the Center for Sustainable Development (KNE) at Darmstadt University of Applied Sciences – European University of Technology (EUT+). KNE focuses on sustainability transformation in higher education and campus development.

The systemic Integration of ESD in Higher Education – Opportunities and Risks

Marlen Arnold

Objectives

The integration of Education for Sustainable Development (ESD) in higher education has gained increasing significance in recent years (Rieckmann et al., 2024; Bellina et al., 2020). ESD enhances the visibility of sustainable development both within universities and among diverse stakeholders (Rieckmann et al., 2024). In the Saxon Higher Education Act (SächsHSG, 2023) ESD is anchored. It is therefore a legal obligation. Nevertheless, ESD remains underrepresented in the discourse on higher education. At the same time, universities face numerous challenges: institutional inertia, lack of time and resources, goal conflicts between disciplinary and interdisciplinary demands, unexamined goal conflicts (Caspari et al., 2025), insufficient or underutilized professional development opportunities (Ruckelshauß & Siegmund, 2024), as well as cultural and social resistance within academic structures hinder the comprehensive integration of ESD. Furthermore, there is a lack of binding evaluation systems for sustainability competencies and often a strategic governance framework that supports transformative processes in teaching and organization. Without targeted structural, cultural, and didactic adaptations, ESD risks becoming mere symbolic politics instead of a powerful tool for future-oriented higher education.

Method

Despite its legal anchoring in Saxon universities, systematic, structurally embedded, and didactically sound implementation of ESD in studies, teaching, and governance is still lacking in many places. When universities demand or introduce ESD in academic contexts, a multitude of questions arise. This

presentation or workshop reflects personal, as Rectorate Representative for Sustainable Campus Development, and reported experiences, successes, and challenges in integrating ESD into university by labs as well as literature analysis and reflects on how universities can meet this challenge, as the successful implementation of ESD in higher education requires systematic and thoughtful approaches.

Key findings

The challenges of implementation or critical reflections are often neglected (Wilhelm et al., 2024). ESD content is accompanied by a range of goal conflicts (Hinzke et al., 2024; Arnold, 2024), just as the application of ESD competencies is inherently conflictual (Arnold, 2021). For instance, awareness of complexity and capacity for action may be at odds—an in-depth understanding of complex problems may also lead to feelings of being overwhelmed and thus result in inaction (Longo et al., 2019). Critical thinking and change may conflict with cultural or traditional values. Another competence-related conflict arises when necessary individual actions, such as reducing one's own carbon footprint, stand in contrast to the insight that profound systemic change is primarily required to achieve scalable sustainability. Thus, the integration of ESD into the higher education sector cannot occur without conflicts and competing goals. It is also important to acknowledge and name "black elephants" (Asayama et al., 2021) and learn to tolerate ambiguities and uncertainties, as ESD is also understood as a process of democratization.

Implementing ESD into university teaching poses a challenge that requires both structural adjustments and a change in the teaching and learning culture (Schrüfer & Eckstein, 2022). Many universities have already had positive experiences integrating ESD into their curricula (Fiselier et al., 2017). One successful approach is interdisciplinarity, where different academic disciplines collaborate to convey a holistic perspective (Arnold, 2021). Another example is project-based learning, where students work on real-world projects to develop sustainable solutions to local or global problems (Riess et al., 2022). However, these examples already show that the design of ESD must be approached with great care; more research is needed on subject-specific implementations of ESD and how required study content can be reconciled with ESD principles.

To integrate ESD successfully, universities must undertake structural changes and initiate cultural transformation. Governance—the steering and interaction of actors, institutions, and processes—plays a central role (Gebauer et al., 2023). Effective steering requires long-term personnel management strategies and adequate communication. When implemented effectively, ESD often promotes a cultural shift toward more sustainability. In the governance context, ESD can be stimulated through strategies and guidelines that support the systematic anchoring of sustainable educational approaches (Bellina et al., 2020). A clear endorsement of ESD governance also initiates institutional cultural change. In the spirit of a “whole institution approach,” ESD encourages participatory and cooperative action (Holst et al., 2024). Therefore, governance processes should be designed inclusively, incorporating diverse perspectives and experiences (Gebauer et al., 2023). Joint development of guidelines and goals can strengthen the acceptance and engagement of all involved and of university members and affiliates, thereby supporting the long-term success of ESD strategies. This includes establishing interdisciplinary teaching and research programs, as well as promoting cooperation across disciplines (Rieckmann et al., 2024; Bellina et al., 2020). It also requires extensive professional development for teaching staff and the provision of necessary resources. Universities can create incentives for students to engage in sustainability projects, such as recognizing extracurricular engagement as part of academic achievements or awarding scholarships and prizes for outstanding ESD projects. Yet, this may come at the cost of other study content, requiring careful consideration. At the same time, the many goal conflicts in this process should be openly addressed and potential solutions explored. (Key findings are also presented in a structured way in a table.)

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HRK – Audit – Sustainability in Higher Education Institutions

Corina Horeth – Jorin Meyer

This workshop will present the “Audit – Sustainability in Higher Education Institutions” developed by the BMFTR-funded project “traNHSform” of the German Rectors’ Conference (HRK). The audit is designed to support higher education institutions in their strategic development towards sustainability by providing tailored, independent, and comprehensive analyses and assessments of their sustainability profiles, goals, and activities. Using a whole-institutional approach, the audit considers regional and institutional specificities to offer customized guidance. Currently the audit is piloted in four institutions: Chemnitz University of Technology, Fachhochschule Dortmund – University of Applied Sciences and Arts, University of Hamburg, and Marburg University. This workshop will provide insights into the conception, highlight lessons from the piloting phase, and encourage discussion on the further development of the format after 2026.

Corina Horeth is a project manager at the German Rectors’ Conference (HRK), where she is responsible for coordinating activities within the project „traNHSform“. The project supports sustainability transformation of higher education institutions. Her work focuses on designing and piloting the “Audit – Sustainability in Higher Education Institutions”. Moreover, she has expertise in different fields of sustainability from her work in a sustainability business network and certified training programs.

Jorin Meyer is a project manager at the German Rectors’ Conference (HRK), where he is responsible for coordinating activities within the project “traNHSform”. The project supports sustainability transformation of higher education institutions. His work focuses on designing and piloting the “Audit – Sustainability in Higher Education Institutions”. Previously, he served as a board member of the Germany-wide student association netzwerk n. He studied Psychology and Sustainability at Leuphana University Lüneburg and the University of Groningen.

specials

Safer Space for Reflecting Sustainability Narratives with Living Libraries

Nayama Elsa Christy – Jeanine Marie Rühle

As UNESCO Chair Student Representatives at Leuphana University Lüneburg, we aim to build a stronger connection between the UNESCO Chair for Higher Education for Sustainable Development and the broader student community at our university. Since this student-led role was established only recently, we have spent the first months shaping our mission: to empower students to critically engage with ESD, support those already involved, and foster networks among sustainability-minded students – both within Leuphana and internationally.

In our early activities, we co-organized a participatory workshop with researchers from Rhodes University (South Africa), focused on ESD and youth engagement. One key takeaway from this dialogue was the need for more open and critical spaces where students can reflect on and question the dominant sustainability narratives within higher education. At our university, sustainability is often communicated through a normative framework of “right” behavior. Several students voiced discomfort with this moral framing and asked for opportunities to engage with alternative and diverse perspectives on sustainability.

In response, we have initiated a new event format grounded in the methodology of the “Living Library” (inspired by The Human Library Organisation). This approach provides a creative, narrative-based, and dialogical space where students can engage in personal conversations with “living books” – peers who share their own experiences, backgrounds, and reflections on sustainability from multiple perspectives. These encounters foster empathy, challenge preconceptions, and allow for multimodal, student-centered learning.

Our workshop invites participants to experience the “Living Library” method as a means of creating safe, inclusive spaces for discussing sustainability in higher education. Together, we will explore how storytelling and narrative-based dialogue can support key sustainability competencies such as critical thinking, empathy, and self-reflection. The session also opens space to reflect on how institutional ESD structures can make room for student voices, doubts, and contradictions - essential components of truly transformative learning.

This workshop contributes to the conference by offering a creative, student-led example of how narrative and dialogical pedagogies can open new horizons for sustainability education in universities.

Idea and Aim

This workshop introduces the Living Library as a narrative and arts-based method for Higher Education for Sustainable Development (ESD), designed to open safer spaces for critical reflection, dialogue, and transformative learning. Participants will explore how this method can support deeper engagement with sustainability by centering lived experiences, emotional complexity, and diverse worldviews.

The Living Library invites students and educators to become “living books” and to share personal sustainability stories in one-on-one or small group conversations. These stories may include:

- Personal sustainability journeys - with a focus on turning points, inner conflicts, and transformative experiences that shape one’s values, motivations, and practices.
- Narratives from minority communities - such as those of Indigenous youth, women, refugees, or people from the Global South, which emphasize environmental justice, colonial histories, cross-cultural dialogue, place-based knowledge systems, and spiritual or cultural practices.
- Everyday sustainability practices - including reflections on food, mobility, clothing, or consumption, to highlight how sustainability is lived and negotiated in daily life.
- Stories of failure, resistance, and hope – offering insights into burnout, institutional obstacles, grassroots resilience, and activism, often left out of mainstream ESD discourse.
- Rewriting dominant sustainability narratives – through critical engagement with concepts such as green growth or techno-solutionism, this dimension encourages paradigm shifts and questions whose visions of sustainability are legitimized or excluded.

Our aim is twofold: first, to motivate educators, students, and stakeholders in higher education to apply the Living Library in their own contexts as a method for dialogical and inclusive ESD; and second, to question dominant sustainability narratives by making space for critical and plural perspectives. In doing so, the workshop contributes to a broader understanding of how storytelling, arts-based methods, and intercultural dialogue can enrich transformative sustainability learning in higher education.

Reference: Human Library Organisation (n.d.), What is the HumanLibrary? <https://humanlibrary.org>

Nayama Christy is a bachelor's student in Global Environmental and Sustainability Studies at Leuphana University, with a minor in Comparative Economic Law. She currently serves as the UNESCO Chair student representative at Leuphana, working to foster dialogue, collaboration, and sustainability within the university community. Her academic journey includes international teamwork and student consulting on sustainability solutions. She has also engaged in Model United Nation debates and various art and science initiatives, earning recognition for her contributions. Beyond academics, Nayama is actively involved in social initiatives through her work with the Lebenshilfe and the

Freiwilligen Netzwerk. She is committed to bridging ideas with action, driving meaningful change in both academic and practical settings.

Jeanine Marie Rühle is currently pursuing an M.Sc. in Sustainability Science at Leuphana University, following degrees in Special Education (B.A.) and Educational Science (M.A.). She is an advocate for Education for Sustainable Development (ESD) and youth participation, serving as a member of youpaN, a youth panel promoting the implementation of ESD in Germany. She is also the German Youth Focal Point for the UNECE Steering Committee on ESD and a jury member for the National ESD Prize of the German UNESCO Commission. Through her role as UNESCO Chair Student Representative, she aims to support students passionate about ESD and foster collaboration between UNESCO Chairs. Through her role, she aims to empower learners passionate about ESD and connect efforts across the ESD network and beyond.

Map/ing Sustainability: Eine partizipative Methode zur Förderung von Systemkompetenz und Nachhaltigkeits-Literacy in der Hochschulbildung

Kim Huber – Katja Kremser

Education for Sustainable Development (ESD) requires more than knowledge transfer – it calls for new ways of thinking, learning, and acting. As we face multiple interconnected global crises, Higher Education must create learning spaces that foster agency, enable critical reflection, and support the ability to navigate complexity. Our proposed workshop introduces Map/ing Sustainability, a participatory method designed to strengthen system competence and sustainability literacy across disciplines. Developed within the project transform.NRW, the method is now being applied in various teaching contexts, particularly in higher education at University of Wuppertal where we address sustainability challenges through co-creative, interdisciplinary learning formats.

The core assumption behind the method is simple but profound: everything we design, build, or implement—whether a product, a policy, a curriculum, or a service—has social and ecological impacts. These effects are interwoven, often unintended, and rarely linear. Learning to identify, analyse, and reflect upon these impact networks is a key element of system competence. Such competence cannot be acquired by reading about systems theory alone—it must be practiced through collaborative, experiential learning. Map/ing Sustainability provides a low-threshold yet powerful framework to do just that.

The method invites learners to explore the effects of a real-world project (or idea) by mapping its possible sustainability impacts along the 17 Sustainable Development Goals (SDGs). The SDGs are not treated as checklists, but rather as an interrelated framework of values and visions (boundary objects). Drawing on the concept of “provisioning systems” (Fanning et al., 2020) as structured in the Global Resources Outlook 2024 (UNEP), the SDGs are organized into three levels:

1. Wellbeing (social outcomes) – such as health, education, equity, and participation
2. Provisioning systems (production & consumption) – such as energy, mobility, food, and digital infrastructures
3. Natural resources (ecological foundations) – such as land use, biodiversity, water, and carbon emissions

Participants work in groups to identify possible “impact chains” or “impact networks” stemming from the example under discussion. They explore how a single intervention might trigger ripple effects—positive or negative—across different dimensions of sustainability. This mapping is both analytical and narrative: it allows participants to tell the story of how things might unfold, where risks might emerge, and where potentials for positive change lie.

The method is particularly valuable in interdisciplinary or transdisciplinary settings, where participants bring diverse knowledge, perspectives, and assumptions. In this diversity lies one of the core strengths of Map/ing Sustainability: it creates a common language and structure that allows for complexity while

encouraging clarity and collaboration. It surfaces existing knowledge but also makes knowledge gaps visible. These gaps are not seen as deficits, but as invitations to research, dialogue, or inclusion of new expertise.

Beyond its analytical function, the method also addresses the cultural and emotional dimensions of sustainability. Each example (whether a product, institution, service, or system) is embedded in broader cultural contexts. The process of collaboratively mapping impacts often leads participants to reflect on heritage—both material and immaterial—as well as on norms, values, and the stories we tell about change. In this sense, Map/ing Sustainability becomes a pedagogical tool that connects sustainability with democratic learning, inclusion, and collective sense-making.

The method supports key competencies outlined in the ESD literature, such as critical thinking, anticipatory thinking, normative competence, and collaboration. It also fosters agency: participants learn not only to analyze existing systems, but to imagine and evaluate alternatives. In our higher education practice, we have found the method to be especially helpful in stimulating reflection between project phases of design (e.g. between research, ideation, and implementation) and in creating a shared basis for decisions in team-based work.

In the proposed workshop, we will:

- present the conceptual background of the method, including its links to system thinking, Theory of Change approaches and the SDG framework
- offer practical insights from real-world application in higher education contexts
- facilitate a hands-on mapping sequence based on a cross-sectoral example
- invite reflection and discussion on how the method might be adapted for diverse educational fields and learner groups

By introducing Map/ing Sustainability to a broader educational community, we aim to share a transferable method that supports critical, creative, and collaborative engagement with sustainability. We believe that fostering system competence is essential for empowering future professionals, educators, and citizens to shape sustainable futures. In the spirit of ESD, the method does not offer easy answers—but it opens up new ways of asking the right questions.

Kim Huber is a researcher at the Wuppertal Institute for Climate, Environment and Energy in the Division of Sustainable Production and Consumption. Her work focuses on transition design, empathy and embodiment in sustainability communication, as well as on real-world laboratory research. She is also involved in transform.NRW in both coordinating and content-related capacities.

Katja Kremser works as a researcher at the Chair of Design Theory and Design Research at the University of Wuppertal. As a strategic designer in the transform.NRW project, she explores questions about the impact of design in the context of sustainability transformation.

transform.NRW is a collaborative project that brings together designers, artists, and scientists from North Rhine-Westphalia to explore how creative practices can drive social and ecological transformation. At its core lies an interactive map and a growing digital archive of good-practice examples, methods, and tools that make sustainability tangible and shareable across disciplines.

Empowering Transformation through the Public Climate School: A Hands-on Approach to ESD in Higher Education and Society, part 1 & 2

Phillip Gutberlet – Rahel Meier – Leona Klanck

In view of accelerating climate change and global ecological crises, Education for Sustainable Development (ESD) must be more than a concept. It must be a lived and transformative practice to empower individuals and communities to take collective action. This workshop, hosted by Klimabildung

e.V., presents the Public Climate School (PCS) as an innovative, award-winning example of ESD in action. It bridges formal education from the young age to higher education, civil society, and many different education initiatives.

Klimabildung e.V. is a nonprofit organization based in Germany that works creatively, action-oriented, and collaboratively to embed ESD, climate justice, and sustainability across all levels of education. In close cooperation with teachers, students, and educational institutions, Klimabildung e.V. develops and implements accessible, practice-based educational formats, conducts participatory research, and fosters an inclusive, empowering learning environment. Its flagship project, the Public Climate School, reflects this mission in a powerful and practical way.

The Public Climate School (PCS) is a nationwide action week that brings climate education into schools, universities, and the public sphere. Originally initiated by the student-led movement Students for Future in 2019, the PCS has evolved into a collaborative initiative led by Klimabildung e.V. since 2022. It provides a diverse, interdisciplinary program of lectures, workshops, panels, and activities focused on the climate crisis, sustainability, and social transformation. Designed to make ESD widely accessible, the PCS invites participants from all sectors (students, educators, scientists, activists, and citizens) to learn, connect, and engage in collective action. Therefore, the initiative has received the Eunice-Foote-K3 Prize for Climate Communication.

In this workshop, participants will be introduced to the concept, structure, and impact of the Public Climate School through a short presentation and insights into the research around its effectiveness as an ESD format. The session will highlight key success factors in implementing transformative climate education at higher education institutions and within society, including participatory governance, intersectoral collaboration, and critical reflection.

Following the input, the workshop will shift into an Open Space format, allowing participants to explore questions that matter most in their own institutional or regional contexts. How can ESD be implemented more effectively in higher education? What strategies can be used to foster engagement across disciplines? How can institutional structures be changed to support long-term transformation in education?

Participants will be encouraged to share their experiences, challenges, and solutions. They may choose to develop initial ideas for projects, explore possibilities for collaboration, or simply network and connect with peers working toward similar goals. Facilitators from Klimabildung e.V. will support the process and share tools from the PCS such as the Climate-Dialog Box which will be launched for the PCS in 2025.

This workshop aims to inspire concrete action and strengthen the international ESD community by showcasing a student-led, practice-oriented approach that works. It is especially suitable for educators, university staff, student groups, and civil society actors who want to transform educational spaces into hubs of climate action and sustainability learning.

Phillip Gutberlet is studying for a B.Sc. in Human and Environmental Studies in Landau, **Leona Klanck** is studying for an M.Ed. in Primary School Teaching in Hamburg, and **Rahel Meier** works as a research assistant in educational science at the University of Hamburg. All three co-founded the Klimabildung e.V. and work there on a voluntary basis.

Education for Sustainable Development in Teacher Education for social transformation in Southern Africa

Sirkka Tshiningayamwe

Globally, there is recognition that teacher education has a role to play in transforming societies. It has also been observed that Education for Sustainable Development (ESD) is integral to addressing emerging interconnected global challenges such as climate change, poverty, loss of biodiversity,

unsustainable use of resources and inequality. Therefore, integrating ESD in teacher education provides future teachers with competencies to make informed decisions and take individual and collective action to transform societies and care for the planet. ESD enhances the cognitive, socio-emotional and behavioral dimensions of learning and encompasses learning content and outcomes, pedagogy and the environment in which learning happens. Despite these recognitions, teacher education has been criticized for not producing future teachers who have professional skills and competencies to integrate ESD in their teaching. The debate about ESD as transformational is thus not new, however, in teacher education there is still a need to research on the role that ESD plays in social transformation. This is particularly important in southern Africa where it can be argued that the integration of ESD in teacher education programs is relatively new. ESD should focus on local matters of concern and should be situated considering cultural aspects and historical legacies. The focus of the paper will therefore be to critically analyze ESD in teacher education programs in southern Africa for social transformation. Moreover, the paper will explore the barriers to achieving ESD for social transformation in teacher education and finally, explore how ESD in teacher education can be supported to transform societies for sustainable futures.

Sirkka Tshiningayamwe holds a PhD in Environmental Education. She is a Senior Lecturer at the University of Namibia in the School of Education. Sirkka has years of facilitating pre-service and in-service programs for teachers focusing on Environmental Education (EE)/Education for Sustainable Development (ESD). She has also supervised undergraduate and postgraduate research focusing on EE/ESD and Science Education (which is her other area of specialization). Sirkka has participated in different collaborations at regional and international level focusing on capacity building of teachers and teacher educators on ESD.

LoLE – Leaders of Learner Empowerment

Daria Humburg

Transforming educational institutions into agents of sustainable development requires leadership that integrates systemic change across all dimensions of school life. The *LoLE – Leaders of Learner Empowerment* training program responds to this need by empowering school leaders to initiate and lead sustainability transformations in their institutions through a Whole-School Approach (WSA). LoLE is an innovative leadership training that addresses two central transformation fields: sustainable consumption, nutrition, curriculum development, participation, grading/examination.

The program targets a previously neglected key group in ESD: school leaders. While they play a central role in anchoring sustainability structurally and culturally in schools, empirical studies show that many feel ill-equipped to enact systemic transformation. LoLE responds to this gap with a six-month training program, conducted in two cohorts (national and international), that empowers participants to develop, implement, and evaluate their own community-based change projects related to at least one of the five transformation fields.

Target groups and setting

The LoLE training reaches:

- 24 German school leaders (two national cohorts)
- 42 international participants (3 from each of seven partner countries: Canada, USA, Costa Rica, Ethiopia, South Africa, Japan and Saudi Arabia)
- While school leaders are the direct participants, the broader impact of LoLE extends to:
- Students, through the empowerment and participation structures
- Teachers, through knowledge transfer and institutional development

- General understanding of leading competencies of school leaders in regard to the scope of the LoLE training
- The change projects are designed to foster student participation, affect institutional practices and promote sustainability beyond the classroom.

Training format and methodology

LoLE combines digital and physical learning formats, peer collaboration, and research-based input. It is underpinned by three interlocking methodological principles:

1. Action research: Participants have applied with a concrete transformation project which they reflect on and develop throughout the training. Structured documentation and targeted input support iterative development in real-life school contexts.
2. Communities of practice: Through buddy systems, peer feedback and case analysis workshops, participants engage in collaborative networks that foster mutual learning.
3. Coaching and consolidation: Participants receive tailored coaching and input from researchers and practitioners.

Through formats like online case analysis workshops all national and international participants are connected. This enables global dialogue and reflection on shared challenges and diverse solutions for WSA implementation.

Project goals and research dimension

The LoLE program pursues three overarching goals:

1. To strengthen the leadership capacities of school leaders in driving WSA implementation through concrete, practice-based change projects.
2. To build international collaboration on sustainability transformation in schools.
3. To create outputs, including an open access training's curriculum, case vignettes and a handout.

A mixed-methods accompanying research design investigates changes in leadership identity, leadership competencies, ideas about concepts of transformative ESD and learner empowerment. Participants document their learning journeys and project evolution, contributing to a repository of practice-based knowledge.

Expected outcomes

- Open access publication of the training modules and case vignettes/ a handout for future use
- Establishment of a growing international ESD school leadership network
- School transformation integrating the WSA

Significance

As one of the first ESD trainings for school leaders, LoLE offers a replicable model for integrating the WSA into school leadership development and bridges global ESD goals with local implementation. Through peer learning and international exchange, it builds leadership capacity that is responsive, participatory, and aligned with the urgent societal need for sustainability transformation.

Daria Humburg (M.A.) is a research assistant and project coordinator in the Leaders of Learner Empowerment (LoLE) project at the Institute for Education for Sustainable Development and Transdisciplinary Research at Leuphana University Lüneburg. She is also a network manager and Societal Partner in the Impact Assessment for Action Competence (IMP>ACT) project of the German Society for Sustainability at Higher Education Institutions (DG HochN). She specializes in the field of Education for Sustainable Development (ESD). In this context, she pursues several perspectives: Firstly, in the IMP>ACT project, she is investigating the effectiveness of ESD formats in higher education, particularly with regard to the promotion of action skills among students and teachers. Secondly, as

part of LoLE, she is developing a free ESD training programme for school leaders based on the Whole School Approach. The aim is to strengthen the empowerment of students through their active participation in sustainability projects. Daria scientifically accompanies the development, needs and framework conditions of the training and evaluates the programme. In this context, she is also aiming for a doctorate. Daria Humburg studied law and political science at Leuphana University Lüneburg and TU Dresden (B.A. and M.A.). Her path to ESD was characterised by her diverse involvement with Greenpeace Dresden e.V. and Lokale Agenda 21 für Dresden e.V.. She also successfully initiated and established a network for innovative teaching formats in the field of ESD at DG HochN. Her central concern is to make ESD accessible, understandable and practical - together with all relevant stakeholders from universities, schools and society.

Embedding Sustainability in Teacher Education: The integrated E:SD Whole-System Approach at Heidelberg University of Education

Alexander Siegmund – Florian Kohler

This contribution presents the integrated E:SD strategy of Heidelberg University of Education as a replicable and transformative Whole System Approach (WSA). Developed since 2021, E:SD exemplifies how a higher-education institution – especially one dedicated to teacher education – can architecturally and culturally embed ESD and sustainability beyond isolated courses or projects, transforming governance, teaching, research, operations, and societal outreach.

Objectives

1. Demonstrate how E:SD integrates ESD and Sustainable Development across five institutional dimensions (governance, teaching, research, transfer/outreach, campus operations), aligning with the UNESCO ESD 2030 framework, Germany's National ESD Plan, and the UN Sustainable Development Goals.
2. Illustrate the interplay of top-down leadership (via the Vice-Rectorate for Sustainability) and bottom-up engagement (through a student-led Green Office and community networks).
3. Assess enabling structures and critical success factors for institutional embedding: participatory governance, digital monitoring, incentives, capacity building.
4. Reflect on challenges in sustaining such transformation – resource constraints, structural inertia, cross-departmental coordination, and impact measurement – offering guided insights for other HEIs.

Following the motto “Teaching – Living – Shaping Sustainability”, E:SD acts as an integrative strategy across five key action areas: governance, teaching, research, transfer, and campus operations. The strategy includes structural innovations such as:

- a Vice-Rectorate for Sustainability (established 2022),
- an interdisciplinary ESD center and a student-led Green Office,
- a sustainability-oriented governance framework with participatory processes and reporting,
- a university-wide monitoring system and digital CO₂ dashboard,
- integration of SDG-oriented modules in curricula and new teaching formats (e.g. real-world labs, service learning),
- and pilot programs like a “social-ecological internship” and “BNE-ready” accreditation goals for degree programs.

Significance & Transferability

The E:SD approach seeks to position sustainability as a cross-cutting principle embedded in institutional logic and everyday practice. It is characterized by both top-down strategic alignment and bottom-up engagement, offering a concrete and replicable model for other HEIs. Special emphasis is placed on preparing future educators as multipliers for transformation.

The presentation will provide an overview of the E:SD concept, integration ESDf and Sustainable Development, development process, showcase success factors (e.g. strong leadership, interdepartmental cooperation, digital integration), reflect on challenges (e.g. resources, incentive systems), and outline how a teacher education university can serve as a real-world laboratory and driver for sustainable transformation. The contribution aims to promote exchange on institutional transformation and contribute to the emerging community of practice around Whole System Approaches.

By focusing on a teacher-education institution, this case emphasizes high leverage: future educators are prepared as ESD multipliers in schools and communities. The E:SD approach provides a roadmap for other HEIs seeking holistic sustainability integration. This includes design principles (e.g., blend of top-down and bottom-up, governance structures, digital tools, student participation) and cautions on common pitfalls. The presentation seeks to foster knowledge exchange within the emergent global community of practice on WSA.

Prof. Dr. **Alexander Siegmund** studied geography, business administration and education at the University of Mannheim. There he received his Dr. rer.nat. in geography in 1997, where he was a research assistant from 1994 to 2001. He obtained his 2nd state examination ("Staatsexamen") in vocational education in 1999 and worked at a school until 2001 as a part-time teacher. Since 2002 he was professor of geography and its didactics at the Karlsruhe University of Education, and since 2004 he has been professor of physical geography and its didactics at the Heidelberg University of Education.

He holds the "UNESCO Chair on Observation and Education of World Heritage and Biosphere Reserve", and is the founding executive director of the Heidelberg Center for Education for Sustainable Development, as well as initiator and study director of a Master in digital ESD. From 2022 to 2025 he has also been Vice-Rector for Research, Sustainability and Digitization at the Heidelberg University of Education. Prof. Dr. Siegmund has also been an honorary professor at the Geographical Institute of the University of Heidelberg since 2006, chairman of the University Forum within the National Platform for ESD and was spokesperson for the ESD University Network Baden-Württemberg from 2014 to 2025.

Florian Kohler, M.Sc. studied biology at the Friedrich Schiller University Jena and regional development and nature conservation (environmental education/ESD) at the Eberswalde University for Sustainable Development. Since February 2019, he has been working as a research assistant in the "Future:N!" project and since 2022 as the coordinator of the Heidelberg Center of Education for Sustainable Development at Heidelberg University of Education. He coordinates ESD and sustainability processes at the university and is involved in international projects like ACT4SDGs. From 2021-2022 he has been a juror for the nationwide award for ESD actors from the Federal Ministry of Education and Research and the German UNESCO Commission. His research focuses on (digital) education for sustainable development, e-learning and higher education.

Whole Institution Approach – an important leverage point for teacher education in ESD

Ann-Kathrin Schlieszus – Jorrit Holst

Whole institution approaches (WIAs) are important leverage points for students' learning processes in the field of sustainability (Holst et al. 2024): if students' learning is embedded in its socio-physical context, educational institutions can become reflective "micro-cosm[s] of a sustainable world" (Sterling 2003, 344). Within these, students can experience how to deal with goal conflicts in the field of sustainability, can acquire democratic competencies and can try out new solutions to sustainability problems in a personally and locally relevant context (Henderson & Tilbury 2004; Buckler & Creech 2014; Mathie & Wals 2022; Holst 2023). By implementing WIAs, educational institutions orient their norms and their entire way of functioning towards sustainability, addressing sustainability not only as learning content, but in all organizational areas (for example in operations, governance,

communication, networks and capacity building), as well as by embracing core principles such as participation, coherence and commitment (Holst 2023).

In this workshop, we will discuss how the implementation of WIAs in higher education institutions can foster students' learning processes with particular regard to teacher education. As a starting point, we will present findings from a case study conducted in the context of the National ESD-Monitoring. In the study, we visited three secondary schools situated in different regional and socio-economic contexts in Germany and conducted interviews with school principals (n = 4), teachers (n = 16), students (n = 31) and other school members (n = 8) to explore central opportunity structures and resistances to change in WIA implementation, using different interview methods (expert interviews and go along interviews (Kusenbach 2018)). The results show that teacher education is an important desideratum for fostering WIAs in schools. In the workshop, we will discuss how higher education can contribute to teacher qualification for implementing ESD holistically – for example by embracing WIAs themselves and by providing specific training opportunities for future teachers. To elaborate different ideas and starting points, we will work with a creative, participative method in small groups.

By qualifying teachers for implementing WIAs in their future schools, higher education institutions can be important leverage points for both a deep and widely spread holistic ESD implementation within the educational system.

Ann-Kathrin Schlieszus is a research assistant at Institut Futur (Department of Education and Psychology), Freie Universität Berlin. As part of the National Monitoring of Education for Sustainable Development (ESD), she is conducting research inter alia on the Whole Institution Approach and youth participation. Previously, she worked on a project to develop ESD training courses for university lecturers at the Heidelberg Center of ESD and coordinated the Baden-Württemberg ESD University Network. Her research interests are whole-institution sustainability, organizational change processes, transformative learning, and university didactics.

Jorrit Holst is a sustainability researcher and policy advisor at Freie Universität Berlin. At the intersection of sustainability science, empirical social science, and educational science, his research examines the systemic integration and practice of sustainability in formal and informal education and learning. Amongst others, he currently leads the work on Whole Institution Approaches (WIAs) to sustainability as part of the German National Monitoring on Education for Sustainable Development (ESD) and the conceptual and empirical research on cultures of sustainability in higher education as part of the KuNaH consortium. He is also a member of the UNECE Expert Group on WIAs, which is tasked with the development of a systemic policy framework for WIAs in the UNECE region.

Integrating Educational Effects and Real World Outcomes in Education for Sustainable Development via Projects: Concepts and Experiences with the PPM-ESPRESSO Method for ESD Projects

Ulrich Holzbaur

Projects are an experience-oriented method that supports holistic education for sustainable development (ESD). Simultaneously, they produce concrete results for a transformation towards sustainable development. We examine project-based education especially in the context of ESD. We highlight the opportunities and challenges of the project method and of projects in the curriculum. Projects can teach skills and competences and support education for sustainable development, the preservation of cultural and natural heritage, democracy education, and the implementation of the whole institution approach. However, they must be planned and implemented systematically.

We reflect on experiences and insights on the topic of project-based learning at universities – from our own projects carried out over thirty years, from the experiences of colleagues from various networks, and from literature. We have used projects with both focusses on subjects (sustainability,

environmental management) and methods (computer science, project management, quality management, statistics, modelling). The experiences are structured in several models such as PPM and ESPRESSO, which can serve as a basis for the implementation of ESD in tertiary education.

One focus is the project “Experience science and practice with sustainability-oriented projects” which was funded by the state of Baden-Württemberg in the program “welcome to science”. Together with the Prepared Project Method (PPM), the ESPRESSO method (Experience Science and Practical Relevance and Learn Sustainably via Sustainability Projects) became the basis for the project method. PPM also integrates aspects and experiences from educational games. Game concepts increase the success rate and contribute to a better assessment and grading of the projects and students.

The impact orientation in projects refers to the two goals of educational projects: the impact of the project on society will be the transformation to sustainable development; and the educational impact of the project will be the contribution to an education for sustainable development. The educational effect depends on the commitment of the students and is linked to the experiential nature of the project.

Challenges arise from meeting the requirements of the curriculum in terms of workload and educational goals such as knowledge and competences. The intensive use of projects and the resulting number of presentations place a heavy burden on educators and learners. The involvement of real stakeholders makes the projects more interesting and effective, but also more complex. Supervision requires a certain degree of standardization. The focus of the educators' role is shifting from support and supervision for projects to the assessment and grading of projects and students.

We summarize the models and methods in such a way that projects can be used in all universities and disciplines for education for sustainable development (see the references).

An important aspect of projects in education is their integration into the educational process and the curriculum. To this end, the educational effect must be considered from the learners' perspective and planned holistically as an educational journey. Adaptation to the workload defined in the curriculum and the comparability of the projects require calibration of the projects.

In each individual project, the ESD content can be a method, a course subject or a project object. This combination gives teachers flexibility in selecting projects, even outside of dedicated ESD courses. The portfolio of all projects in a semester and the integration of presentations into the educational journey ensure that the educational impact extends beyond the individual project. The diversity of project types also allows different skills to be focused on in individual projects.

The integration of projects into overarching meta-projects allows for an effective and efficient impact on the transformation of higher education and society, as well as interdisciplinary projects. This also involves stakeholder management, which integrates project partners from e.g. city administration, business, schools and associations into the entire process. The involvement of project partners from the faculties and from the university's technical and administrative departments enables projects that implement the whole institution approach at the university. In addition, the presentations and public relations work of the projects themselves make an important contribution to raising awareness and transformation throughout the university.

The PPM-ESPRESSO project method is based on appropriate preparation by the educators, integrating the educational effect and social impact. The educational journey is based on the project portfolio, the integration of method and object, and the project preparation with a balance between pedagogical impacts and transformative outcome. The design of meta-projects and stakeholder management are essential factors for efficiency and transformative impact of the projects.

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Ulrich Holzbaur holds a Dipl.-Math. (MSc in Mathematics) for a thesis on microprocessors, and a Dr.rer.nat (Ph.D.) for a thesis on stochastic dynamic programming, both from Ulm University. From 1985 to 1990, he worked as a software systems engineer and as head of an airborne radar software team. From 1990 to 2023, Holzbaur was a professor at Aalen University. His lectures and research comprised sustainable development, mathematical modelling, and project management. He was (vice/acting) Dean of the Faculty of Economics and Management for five years and established the working groups on educational games and on sustainable development. Ulrich Holzbaur runs the Steinbeis Transfer Center for Sustainability and Management. He published several books and papers. He presented papers at conferences, gave lectures and participated in projects in 17 countries.

Cultivating transformative agency: Empirical results from the ESD project #climatechallenge

Markus Szaguhn – Leonie Schröpfer – Annika Fricke

Sustainability transformations require dedicated change agents, who actively initiate transformation processes, frequently emerging from experimental learning spaces within niches. Creating these niches appears to be a necessity to mainstream Education for Sustainable Development (ESD). We present empirical findings from the nationwide climate protection project “#climatechallenge” funded by the German National Climate Protection Initiative from 2023 to 2025 and implemented by Germanwatch e.V., netzwerk n e.V. and the Karlsruhe Transformation Center for Sustainability and Cultural Change.

#climatechallenge as a contribution to the Whole-Institution Approach: The project aims at systematically scaling the eponymous transformative, climate action-oriented workshop format #climatechallenge across Germany, in various target groups, including schools, universities, extracurricular learning institutions, and municipal settings. The workshop format was piloted in a higher education context for about seven years at the University of Applied Sciences Constance (HTWG) and received the first prize for Higher Education for Sustainable Development (HESD) in 2021, awarded by the Heidelberger BNE-Zentrum. The #climatechallenge workshop format unfolds its transformative potential on an individual and structural level. Thereby it is unique in its potential to activate and accompany groups in changing institutional structures in the logic of the Whole-Institution Approach (WIA). The three-part workshop focuses on two interconnected and constitutive transformation experiments, called Footprint and Handprint Challenge: The first experiment operates at individual level (footprint). The successive second experiment fosters collective action towards establishing climate-friendly structures (handprint). It thereby facilitates the participants' engagement in authentic real-world interventions through both footprint and handprint actions. These interventions can create spaces both for inner transformation processes and for structural changes contributing to systemic transformation. Particularly the handprint concept aims at facilitating structural change in the respective environments of the participants. They are motivated to reflect upon all the unsustainable structures of their institution, to then tackle the one that appears especially interesting and promising to them. This resulted in practical examples like a repair café at the university of Bielefeld, a university-wide recycling paper towel system at the university of Rottenburg or a daily vegan meal in the cafeteria of the university of Augsburg. We believe, the #climatechallenge workshop format can link the participants' activities in higher education to governance of the university – thereby contributing to overall campus sustainability and transformation.

Development of Climate Challengers: As part of the overall and more comprehensive project monitoring, we focus on a specific group within the #climatechallenge: the so-called Climate Challengers. They are approx. 30 trained core multipliers who offer #climatechallenge Workshops across Germany and have been surveyed over a three-year period. In a mixed method approach, the

Climate Challengers answered several questionnaires and participated in semi-structured interviews. The quantitative part examined trajectories of their awareness development, perceived options for action, and behavioral change regarding footprint and handprint. The qualitative part further examined the Climate Challengers' reflections on their roles, and their assessment of the workshop format's transformative potential based on their facilitation experiences across heterogeneous target groups all over Germany. The results are the starting point to discuss the potential and role of educational multipliers as change agents themselves – and how they further initiate collective engagement (on the handprint level) of the workshops' participants, so they also can become change agents by taking part in the challenges.

Besides the direct educational effects of the #climatechallenge workshop format on the multipliers, focusing on the development of transformative agency, the presentation will also give insights into our experiences of embedding the workshop format in the curricula of higher education institutions as a contribution to the WIA. Thereby we would like to give an impulse for the discussion on the future of HESD – to foster sustainability leadership in the realm of structural sustainability transformation, to find solutions to the global polycrisis together.

Markus Szaguhn is a mechanical engineer, working in transformative sustainability research. He is interested in the question, how learning and teaching formats with experiments can strengthen competencies of (future) change agents. He is co-leading the climate education project #climatechallenge at KIT. It combines individual climate action with collective transformation approaches, to bring about structural changes towards a climate friendly society. Also, he applies his research in change management in corporate contexts.

Leonie Schröpfer (M.A.) currently works as project coordinator in the climate education project #climatechallenge at netzwerk n e.V. As a freelancer she teaches at the Leuphana University Lüneburg, among other places. Her academic expertise lies in transformation and environmental sciences with a specific focus on Education for Sustainable Development and Transformative Education. After her B.Sc. at the Albert-Ludwig-University of Freiburg in Liberal Arts and Sciences, majoring in environmental sciences, she went up north for the M.A. Transformation Studies at the Europa University Flensburg.

Annika Fricke (M.Sc.) is a geoecologist and has been a sustainability researcher at the Karlsruhe Transformation Center for Sustainability and Cultural Change (KAT) at the Karlsruhe Institute of Technology (KIT) since 2017. She currently works as a project coordinator in the climate education project #climatechallenge at KAT. Her research interests lie in transformative, transdisciplinary research, personal sustainability, and the connection between resonance and sustainability.

Greening Vocational Education – A Case Study of adapting Eco-Campus Programme for Learning and Practice in Hospitality Schools

Pramod Kumar Sharma – François Schnoebelen

The hospitality sector is undergoing a transformative shift as environmental imperatives, climate change accountability, and changing consumer expectations push tourism and service providers towards adoption of more sustainable operations.

Green Key, a leading international eco-certification program run by Foundation for Environmental Education for the hospitality industry, has responded to this demand with a rigorous set of criteria aimed at improving the environmental and social performance of hotels, hostels, small accommodations, attractions, conference centers, restaurants, campsites and holiday parks. The program has grown by 41 percent since 2021 by the end of 2024 (FEE Annual Reports). However, one critical challenge remains in terms of trained workforce that is not just ensuring technical compliance to meet the criteria, but also to understand the deeper principles, values, and competencies that underpin sustainability. To address this gap, the Foundation for Environmental Education (FEE) has adapted its Eco-Campus program to the context of hospitality schools, offering a structured model to

equip students and institutions with the tools, mindsets, and practices needed to support Green Key-certified operations (FEE Eco-Campus Handbook, 2024).

There is a clear need to embed sustainability into the curricula and institutional culture of hospitality Technical and Vocational Education and Training (TVET) institutions. With 81% of travelers stating that sustainable travel is important (Booking.com, 2023) and 70% of hospitality companies requiring sustainability-trained staff (EHT Eco-Campus Report, 2023), it is no longer viable to treat sustainability as optional. It has become a core employability skill and a strategic lever for responsible tourism as the global chains have embraced sustainability as a core value. TVET institutions are uniquely positioned to respond to this need. As the bridge between education and career, they provide hands-on, applied learning experiences that mirror real-world environments. Their pedagogical approach—rooted in “learning by doing”—is inherently compatible with Eco-Campus’ action-oriented seven step framework. The school setting is the right moment as students form their professional identities and can be shaped to see sustainability not as an add-on, but as central to their roles in the industry.

The Eco-Campus methodology is grounded in the 7-Step framework—shared across FEE’s global education programs—which guides institutions through a cycle of participatory assessment, planning, implementation, and evaluation. Within the hospitality context, this approach has been contextualized to focus on operational domains relevant to the Green Key standard: energy and water management, waste reduction, sustainable food systems, biodiversity enhancement, and multi-stakeholder engagement. Sustainability becomes embedded across both campus operations and academic structures. Students gain hands-on experience in sustainability audits, behavior change campaigns, performance monitoring, and impact communication—skills directly transferable to hospitality roles. Simultaneously, institutions benefit from operational efficiency, improved environmental outcomes, and alignment with SDG targets and national policy frameworks.

Eco-Campus also enables deeper collaboration between education providers and the hospitality industry. Green Key-certified establishments can act as learning labs, internship sites, and content co-creators. In return, they benefit from access to a pipeline of graduates already familiar with certification criteria, operational priorities, and sustainability communication. This symbiotic relationship strengthens both the credibility and the outcomes of certification and education programs, while forging a shared understanding between academia and industry.

The case study will share the experience of piloting the approach at École d’Hôtellerie et de Tourisme Paul Dubrulle (EHT), Cambodia with support from Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ, - German Society for International Cooperation). Since adopting the program in 2022, EHT has embedded Eco-Campus practices through a student-led Eco-Committee, structured sustainability audits, and an action plan covering food waste, energy use, sustainable procurement, and biodiversity. The 2023 report documents a 24% reduction in food waste, increased participation in “Green Events,” and the integration of sustainability themes across curricula in culinary arts, service management, and hospitality leadership. Students also critically analyze their internship experiences through an Eco-Campus lens. The initiative has enhanced skill development in leadership, collaboration, communication, event design, and solution thinking—while fostering accountability and a long-term commitment to sustainability principles.

Nonetheless, institutional feedback after the pilot highlights a set of practical challenges. Language remains a key barrier, as the technical vocabulary of sustainability can be difficult for non-native English speakers. Short-duration certificate courses in the hospitality sector limit continuity in project-based work and the retention of long-term impact data. Furthermore, students entering from practical, non-academic backgrounds may struggle with abstract concepts such as systems thinking and planetary boundaries. Unlike universities, most TVET institutions do not support structured research or formal academic publishing. These challenges underscore the need for simplified, locally relevant, and adaptable materials that make sustainability education accessible without sacrificing depth.

Integrating the Eco-Campus program into hospitality TVET institutions delivers a strategic response to the sustainability skills gap within the sector. It aligns education with real-world professional standards,

empowers students as change agents, and establishes a replicable framework for embedding ESD into practice. As sustainability becomes a cornerstone of employability, competitiveness, and compliance in the global hospitality industry, such initiatives will be critical in ensuring that the next generation of professionals are not merely prepared to follow but positioned to lead.

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Dr. **Pramod Kumar Sharma** is a Senior Director of Education at the Foundation for Environmental Education (FEE) with over 27 years of experience in Education for Sustainable Development. He has worked on diverse ESD projects, collaborating with governments, educational systems, corporations, and rural communities. At FEE, Dr. Sharma oversees programs such as Eco-Schools, Eco-Campus, Learning about Ecosystems and Forests and Young Reporters for Environment, reaching 101 countries. He has been actively involved with international organizations like UNESCO for GEP and serves as the European Regional Hub Co-Chair for the MECCE Project. Holding a PhD in Environmental Literacy Assessment, an MBA, and a Bachelor's in Science and Education, he is deeply committed to advancing ESD globally.

François Schnoebelen, Executive Director of École d'Hôtellerie et de Tourisme Paul Dubrule, Cambodia.

Experiential Learning for Sustainable Development: Extramural Collaborations in Higher Education's Transformative Approaches

Hasnain Bokhari – Bettina Hollstein

Objectives

Education for Sustainable Development (ESD) approaches in higher education, grounded in John Dewey's pragmatist educational theory, facilitate transformative experiences that enhance students' critical thinking and problem-solving skills. Problem-based learning with extramural partners offers students experiential learning and provides these partners the opportunity to revisit concepts of interdisciplinary dynamics and collaborative work in their daily work routines. This study examines how problem-based learning with extramural partners creates dual benefits:

- For students, it offers experiential learning opportunities to address real-world sustainability challenges.
- For partners, it provides a platform to rethink interdisciplinary collaboration and workflows.

This study is situated within the broader "Climate Network for More Sustainability in Thuringia" (KLIMA-N), a collaborative research project involving four universities, each adopting a whole-institution approach to address distinct facets of sustainability. For instance, the University of Erfurt, which is the focus of this article, examines transformative teaching-learning arrangements, such as service-learning capstone projects, to evaluate their effectiveness in ESD. Other partner institutions contribute complementary expertise (e.g., climate-friendly campus management and sustainability communication), demonstrating how interdisciplinary collaboration can drive systemic change.

This research aims to explore the impact of experiential learning, specifically through service-learning capstone projects, on both students and extramural partners in higher education. The study focuses on evaluating how collaboration with extramural partners enhances students' self-efficacy, problem-solving skills, and motivation in addressing real-world sustainability challenges. Furthermore, it

assesses the benefits for extramural partners, including organizational learning and the integration of interdisciplinary perspectives into their workflows. Additionally, the research aims to investigate the role of diversity among student groups in promoting creative solutions and critical thinking, while validating hypotheses derived from John Dewey's pragmatist education theory and Education for Sustainable Development (ESD) frameworks regarding the effectiveness of service-learning in higher education.

Methodology

The study employs a qualitative research design, conducting structured interviews with seven extramural partners who collaborated with the University of Erfurt's Master of Public Policy program on capstone projects. It examined the perspectives of extramural partners from the 2021/22 and 2022/23 capstone projects, which involved 100 graduate students from diverse nationalities and academic backgrounds. A structured interview guide was developed, focusing on seven categories: sustainability objectives, general experience with capstone projects, collaboration dynamics, interactions and engagement, impact on collaborative practices, organizational learning, and future collaboration. Interviews, lasting 30 to 35 minutes, were conducted in July 2024 via telephone or internet-based calls in German or English. All interviews were recorded, transcribed, and anonymized. A deductive thematic approach was used, with codes derived from the theoretical framework. For content analysis, MAXQDA software facilitated systematic coding and theme identification, ensuring consistency and validity.

Key findings

Extramural partners reported that capstone projects provided students with opportunities to address real sustainability challenges, fostering self-efficacy and confidence. However, time constraints were identified as a limiting factor. The interdisciplinary and international composition of student groups enriched problem-solving by integrating diverse perspectives. While communication challenges arose, the benefits of diversity outweighed these issues. The interview partners acknowledged gains in organizational learning, such as reflecting on their practices and adopting innovative methodologies introduced by students. However, partners primarily focused on student development rather than their own reflexive processes. The study underscores the importance of institutional support for service-learning initiatives, aligning with broader calls for a whole-institution approach to ESD. The KLIMA-N project, especially its ESD subproject at the University of Erfurt, showcases how universities can integrate sustainability into teaching, research, and partnerships, although more research is necessary for systemic implementation.

Significance of the Research

The study holds significant implications for higher education and sustainable development. It validates the integration of Dewey's pragmatist theory and ESD frameworks, demonstrating how experiential learning fosters democratic values, critical thinking, and sustainability competencies. The findings highlight the effectiveness of service-learning in bridging academic knowledge and real-world challenges, providing a model for universities to enhance ESD curricula. The research underscores the need for structured preparation, including role clarification and project management training, to optimize service-learning collaborations. It also calls for greater emphasis on reciprocal learning, ensuring both students and extramural partners benefit equally. The study acknowledges its limitations, including the need for comparative research across disciplines and regions, as well as the potential risks of "greenwashing" in collaborations with profit-driven organizations. Future studies could explore these dimensions to refine service-learning frameworks. In conclusion, the research provides empirical evidence supporting service-learning as a transformative tool for ESD in higher education, while also outlining actionable recommendations for improving collaborative practices.

Hasnain Bokhari coordinates the multi university project “The Climate Network for Greater Sustainability in Thuringia” at the Max Weber Center for Advanced Cultural and Social Studies, University of Erfurt. He also serves as Head of Digital Policy and Artificial Intelligence at the Willy Brandt School of Public Policy. His research focuses on sustainable development, digitalization, and public sector reform, with particular attention to how ICT can enable equitable access and drive sustainable outcomes. Bokhari serves as an Associate Editor for the Journal of Entrepreneurship and Public Policy (Emerald) and is an External Associate at the Centre for Digital Development, University of Manchester.

Engineering for Sustainability – Teaching sustainability in a project-based degree programme to create benefits for students, university and region

Kai Masuch – Dirk Nissing

1 Introduction and Objectives

Rhine-Waal University of Applied Sciences is teaching sustainability in a project-based way with a new concept. We present the development process and reflect on the experiences. The innovation involves the entire curriculum and can serve as a blueprint for other study courses.

2 Goals and Design Criteria of the Degree Program

Starting Point:

- Offer a contemporary study program
- Improve graduation rates
- Retain students in the region
- Replace mathematics as a subject with application-oriented mathematics within the modules
- Foster cooperation with regional companies on an equal footing
- Ensure enjoyment for students, lecturers, and companies
- Promote value-based education and skills development through direct contact
- Establish engineering sciences as a “supplier” for the regional sustainability transformation

Requirements for the Structure of the Study Program:

- Project Orientation: Serves the goal of providing a future-oriented and sustainable education for students.
- Competence Orientation: Takes precedence over subject-specific expertise and is defined for the entire program through a competence matrix. The teaching of subject expertise is guided by the targeted competencies.
- Paradigm Shift: The role of academic staff changes from that of lecturers to academic mentors. Throughout the program, students’ roles evolve – from learners to participants who also take on teaching and mentoring responsibilities.
- Organizational Structure: The program is organized through a Center structure, with professors responsible for program content serving as Center Leaders. Full responsibility is transferred to these professors and the participating research staff.
- One Mission: The establishment of Centers of Knowledge aligned with professors’ specializations enhances external visibility and facilitates stronger regional marketing of research and knowledge transfer.
- Integration and Living Lab: Integrating research and transfer into teaching through a project-oriented study program creates time synergies (for research) and attracts entrepreneurial projects to the university (for transfer).

3 Curriculum Development

Curricula form the foundation of educational work. They must be systematically developed and continuously adapted to new insights and societal developments. Theory and practice phases alternate in a way that maximizes both understanding and application of knowledge. Projects promote a wide range of competencies, particularly in Education for Sustainable Development (ESD). In addition to subject knowledge, social, methodological, and planning skills play a decisive role.

Due to the strong practical focus, participants not only learn theoretical concepts but also experience the challenges involved in implementing sustainability goals. Projects offer numerous learning opportunities in ESD by making real-world challenges tangible within a controlled framework.

The Educational Journey is not seen by the teaching staff merely as a professional endeavor but also as a personal challenge. In this program, people—their personalities and development - are at the center. This perspective may initially surprise those with a strong technical orientation. We do not know what specific tasks our graduates will face ten years from now, but we do know that the world will need talented individuals with integrity and a sense of responsibility. Guided by the principles of systems thinking, curiosity, and a commitment to sustainability, students are encouraged to pursue an individual learning path.

4 Organizational Implementation

Centers of Knowledge are defined by the expertise of their instructors, while organizational dependencies are minimized through a block-based model. Students spend between three and seven weeks in a given Center of Knowledge before moving on to another. This ensures full concentration on a single module, which can be completed within a short time frame.

Each semester, the number of Centers attended by students decreases, while their time in each Center increases. This way, students progress from a broad foundation toward a deeper specialization in just two Centers, which will also serve as thematic bases for their internships and final theses.

Students continuously alternate between independent theoretical work, the practical application of knowledge in projects, and reflection on how theoretical insights contribute to problem-solving. Guided by academic mentors, students question concepts, integrate feedback for improvement, and gradually assume leadership roles as their studies advance.

5 Project Preparation

Teaching projects arise from real-world challenges posed by regional companies as well as from research initiatives within the university that require technical support to enable sustainability transformations. The following aspects must be considered:

- Project partners and stakeholders: They bring expectations and objectives that influence the project.
- Teams and individual students: Each team consists of members with diverse backgrounds, competencies, and priorities. Students from different semesters or degree programs collaborate under varying curricular requirements. Abilities such as abstraction, organizational skills, motivation, and social competence are key.
- The university: It defines the academic standards and provides the framework conditions for projects. Legal, financial, and organizational requirements must be met.
- Supervisors: Lecturers face the challenge of efficiently combining content delivery, competence development, and project supervision. Supervision must be planned systematically to ensure realistic workloads, meaningful results, and an efficient balance between effort and impact.

The project portfolio is designed to cover various disciplines and sustainability themes.

6 Summary

We discuss the development of the new Engineering for Sustainability degree program as a One-Mission study program. It is characterized by its project-based teaching approach, using sustainability as a creative method. The goal is to provide students with experiential, practice-oriented learning while fostering interdisciplinary collaboration.

Prof. Dr.-Ing. **Kai Masuch** is a professor of Thermodynamics and Process Engineering at Rhine-Waal University of Applied Sciences, leading the study programs Engineering for Sustainability and Mechanical Engineering. Before joining the university, he taught mechanical engineering, mathematics, and applied sciences at Max-Born-Berufskolleg, where he also trained trainee teachers and led the technical product design program. In industry, he served as Technical Division Manager in a medium sized company, directing projects in biomass processing and process development for biogenic residues. Earlier academic positions include Deputy Director and Senior Engineer at the University of Stuttgart's Institute for Technical Thermodynamics and Research Associate at RWTH Aachen, where he worked on modelling thermophysical properties and transport processes in biopolymers.

Prof. Dr.-Ing. **Dirk Nissing** is a Professor of Control Engineering at the Faculty of Technology and Bionics at Rhine-Waal University of Applied Sciences in Kleve since November 2011. He is currently Dean of the faculty and leading the study program Engineering for Sustainability. He earned his degree in Mechanical Engineering in 1998 from Gerhard-Mercator-University (now the University of Duisburg-Essen) and obtained his Ph.D. in 2001 in the field of Measurement, Control, and Regulation Technology. From 2001 to 2011, he worked at TRW Automotive GmbH in the Tech Centre Düsseldorf, where he held various positions, culminating as Global Chief Engineer/Department Head for Steering Functions. His research interests include the development of control algorithms for driver assistance systems in personal vehicles, emphasizing the integration of human factors in the control loop. This work encompasses modeling, controller development, and testing using Hardware-in-the-Loop (HIL) setups.

facilitators

Bianca Bilgram studied English Literature, History of Ideas (BA) and Social Anthropology (MA) at Kingston University and the School of Oriental and African Studies, University of London. Between 2004 and 2007 she was project manager at the London office of the German Academic Exchange Service. Since 2007, she has been supporting the implementation of Education for Sustainable Development (ESD) at the German Commission for UNESCO at national and international level and since 2013 heads its task force for education for sustainable development.

Jacobus Bracker is an archaeologist and ESD educator. He authored and edited numerous publications on visual culture and narrative theory in ancient contexts. His current research includes the transformative power of narrative images for cultures of sustainability. At the German Rectors' Conference he leads the section for culture, education for sustainable development and student affairs as well as the project "EmpowerESD: Education and sustainability coaching for university transformation". Moreover, he has a rich teaching experience in ESD and environmental humanities from his work at the Universities of Hamburg, Freiburg and the Hamburg University of Technology.

Lukas Klünemann studied History and Political Sciences (BA) and Public History at the University of Bielefeld and the University of Cologne. In 2020 he joined the German Commission for UNESCO at the task force of Intangible Heritage. Since 2022 he is working as a Programme Specialist at its task force for Education for Sustainable Development.

Coco Klußmann is a project manager at the German Rectors' Conference (HRK), where she is responsible for coordinating activities within the project "traNHSform". The project supports sustainability transformation of higher education institutions. Her work focuses on designing and piloting the "Audit – Sustainability in Higher Education Institutions". She has researched sustainability transformation of HEIs and the introduction of (participatory) sustainability reporting. She has also accompanied and introduced several (governance-orientated) sustainability processes and has been networking within the German Society for Sustainability (DG HochN) for years.

Maike Land is a climate justice activist and ESD ambassador. She works part-time at the German Rectors' Conference. Here she works on the project "EmpowerESD: Education and sustainability coaching for university transformation". She focuses on sustainable development, decolonial education and climate justice. As an environmental economist (Resource and Environmental Economics, M.Sc.) and cultural researcher with a focus on Southeast Asia (International Culture and Business Studies, B.A.), she brings transdisciplinary perspectives to her work. She is committed to promoting educational concepts that break down power asymmetries and promote intercultural understanding. During her studies she has actively advocated for cross-status collaboration and climate education at universities.

Marlen Meissner is head of the department 'Heritage, Nature, Society' at German Commission for UNESCO. Together with her teams she is responsible for the implementation and communication of UNESCO Conventions and programmes in Germany as well as for the support of respective networks, e.g., ESD actors, UNESCO Chairs, Associated Project Schools, UNESCO World Heritage Sites, Intangible Cultural Heritage, UNESCO Creative Cities, UNESCO Learning Cities, UNESCO Global Geoparks or UNESCO Biosphere Reserves. After having studied Cultural Studies and Anglistics as well as Instrumental and Vocal Pedagogy, Marlen coordinated international research projects on cultural heritage and sustainability at the UNESCO Chair in Heritage Studies at Brandenburg University of Technology. In her dissertation, she analysed the potentials of intangible cultural heritage for sustainable development.