

# MANUAL ON ESD EVALUATION

## MODULE 1 *ESD AND EVALUATION*

**MATTHIAS BARTH**

# Module 1

## ESD and Evaluation

Matthias Barth



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**THE FOUR MODULES OF ESD EVALUATION COURSE ARE DESIGNED TO BE USED IN CONJUNCTION WITH EACH OTHER. MANY OF THE TERMS AND CONCEPTS USED IN THIS MODULE ASSUME KNOWLEDGE THAT COME FROM ALL THE SECTIONS OF THE ESD EVALUATION MANUAL. HENCE, THE MODULES SHOULD NOT BE USED INDEPENDENTLY.**

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# SUSTAINABLE DEVELOPMENT GOAL 4

## 4 QUALITY EDUCATION



**Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**

Target 4.7 by 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development



# ACKNOWLEDGEMENTS

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The ESD Evaluation course has been brought together after efforts of more than two years. The Working Group on ESD Evaluation commenced its work after the presentation by Rob O'Donoghue and the team at Bonn Conference on "From Knowledge to Action: ESD versus Climate Change" in November 2017. Deepika Joon and Eureka Rosenberg presented the concept of ESD Evaluation at the CIES 2019 conference in San Francisco which was followed by the first meeting of the Working Group in Berlin in August 2019.

We would like to acknowledge with much appreciation the participants of the summer academy on "Regenerative ESD and Evaluation for the Future We Want" held from 21 July to 20 August 2021 for their feedback on the curriculum. Special thanks to Preven Chetty for his work on module 2. The speakers of the summer academy Aymara Llanque Zonta, Deepak Ramola, Heila Lotz-Sisitka, Injairu Kulundu-Bolus, Jennifer Krah, Jiska Troppenz, Louisa Syzmerek, Saransh Sugandh and Thomas Salmon provided critical insights into the topic of ESD and Evaluation. In addition, we would like to thank colleagues from Engagement Global for their support.

# Module 1

## ESD and Evaluation

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# Module 1

# ESD and Evaluation

**Matthias Barth**

## INTRODUCTION TO THE CONTENT AND STRUCTURE OF MODULE 1

This is the first module in a short course in Education for Sustainable Development (ESD) Evaluation for ESD practitioners in diverse contexts, including ESD centres, universities, organizations and programmes. The module will introduce you to ESD as an educational concept including its underlying assumptions about learning and education. It will then bring together the two concepts of ESD and evaluation and will present you a framework for ESD evaluation which will help you becoming aware of the challenges, pitfalls and opportunities when doing ESD evaluation and to position your work in such a framework.

The learning objectives will be achieved by engaging with the content of the module in various forms and formats: videotaped presentations will introduce key concepts and theories. Annotated lists of key readings will allow the participants to engage more deeply with aspects that are of particular interest for them. Evaluation: A 'nested game changer' for ESD is introduced in a key reading and further explained and discussed in a conversation between Matthias Barth from Leuphana University and Rob O'Donoghue from Rhodes University.

## LEARNING OBJECTIVES

After successfully finishing this module, the participants will...



... have a thorough understanding of Education for Sustainable Development (ESD) and its underlying assumptions of learning and education



... be able to differentiate and systematize different forms of learning and its relation to sustainability

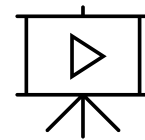


... be able to derive consequences for designing and evaluating ESD



... understand the relation of ESD and evaluation including challenges, pitfalls and opportunities, ideas and concepts introduced to your work and experience.

A short video introduction by Matthias Barth gives you an overview of the content and structure of module 1. The introduction video will explain and justify the learning objectives, learning opportunities and assignments to evaluate your learning progress.



[Module 1: Introduction to ESD and Evaluation - Matthias Barth](#)

(Please click on the link above to access the video)



## EDUCATION FOR SUSTAINABLE DEVELOPMENT – A REFRESHER PART 1

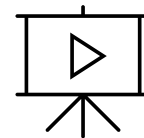


You are now moving to the first presentation of Module 1, a refresher on Education for Sustainable Development. This refresher is divided into three recorded presentations.

**Speaker:** Matthias Barth

In the first videotaped presentation by Matthias Barth, you will learn more about (or be able to refresh your knowledge on) the concept of ESD. It will be introduced as an educational idea shaping pedagogical practices in formal and informal learning as well as a conceptual framework being shaped by educational policy around the globe.

You might want to use the pdf version of the slides to make notes and you are more than welcome to explore deeper into the topic with the suggested literature. A discussion forum allows you to raise questions and discuss them with your peers or seek answers from your lecturer.



 [Module 1: ESD and Evaluation Part One, ESD Refresher 1 - Matthias Barth](#)

(Please click on the link above to access the video)

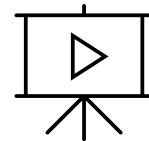
### MENTIONED IN THE LECTURE

- Club of Rome
- Planetary boundaries
- Doughnut of social and planetary boundaries by Kate Raworth
- Instrumentalist and emancipatory forms of education
- ESD 1 and ESD 2 by Paul Vare and Bill Scott

## EDUCATION FOR SUSTAINABLE DEVELOPMENT – A REFRESHER PART 2

Speaker: Matthias Barth

In the second video, Matthias Barth talks about how ESD evolved over time to provide an understanding of the maturation and developments in the field. Matthias then delves into understanding ESD through the interface between policy and praxis. In this video, the participants also learn about the importance of ESD as a firmly established concept receiving necessary political will and understanding.



[Module 1: ESD and Evaluation Part One, ESD Refresher 2 - Matthias Barth](#)

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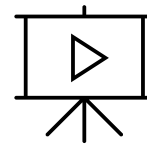
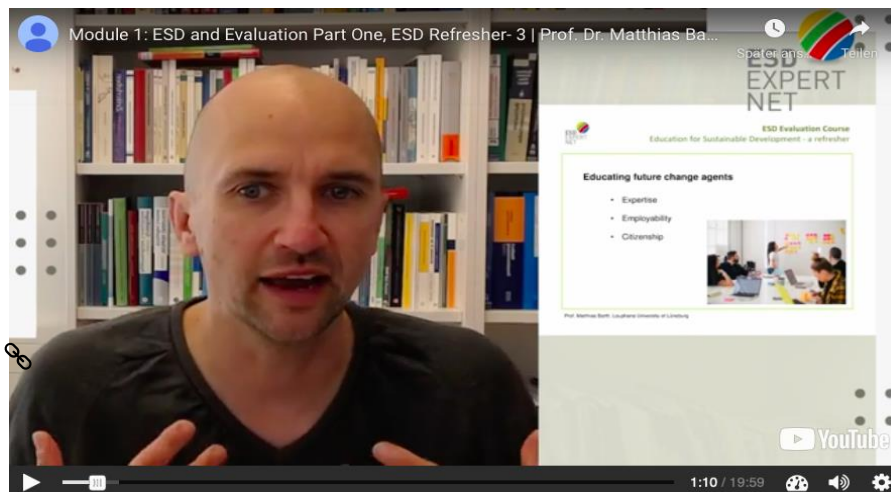
### MENTIONED IN THE LECTURE

- Emergence of Education for Sustainable Development
- *Waldsterben*
- United Nations Decade of Education for Sustainable Development (2005-2014)
- The Earth Summit - The United Nations Conference on Environment and Development, Rio De Janeiro, Brazil, 1992

## EDUCATION FOR SUSTAINABLE DEVELOPMENT – A REFRESHER PART 3

**Speaker:** Matthias Barth

In this presentation, Matthias Barth continues with the introduction to Education for Sustainable Development by now looking into the questions: How do we actually do it? What is important when it comes to the praxis of ESD? The presentation provides foundational questions that guide ESD practice - whom are we going to educate, who is it that we want to support in the learning process, and to what end, with which pedagogies and methods, and about which content?



Module 1: ESD and Evaluation Part One, ESD Refresher 3 - Matthias Barth

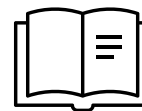
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### MENTIONED IN THE LECTURE

- Three approaches to ESD: Industry, academic and key competencies for sustainable development
- Prof. Arnim Wiek's "Sustainability Competencies"- systems thinking competence, anticipatory competence, normative competence, strategic competence
- Sustainable Development Goals (Website available in Arabic, Chinese, English, French, Russian, and Spanish)
- System science perspective
- Pedagogical shift in ESD from teaching to learning
- Collaborative learning

## EDUCATION FOR SUSTAINABLE DEVELOPMENT – KEY READINGS

Below is an annotated list of suggested key readings on ESD. While these are not mandatory for the course, they should allow the participants to dig deeper on certain aspects they are interested in.

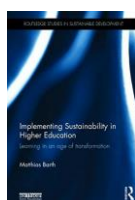


**Vare, P., & Scott, W. (2007). Learning for a Change: Exploring the Relationship Between Education and Sustainable Development. *Journal of Education for Sustainable Development*, 1(2), 191–198.**

In this opinion essay, Paul Vare and Bill Scott explore the ideas behind ESD and argue that it is necessary now to think of two complementary approaches of emancipatory and instrumental education: ESD 1 and ESD 2.



**Wals, A. E. J., Geerling-Eijff, F., Hubeek, F., van der Kroon, S., & Vader, J. (2008). All Mixed Up? Instrumental and Emancipatory Learning Toward a More Sustainable World: Considerations for EE Policymakers. *Applied Environmental Education & Communication*, 7(3), 55–65.**



**Barth, M. (2015). Implementing sustainability in higher education: Learning in an age of transformation. *Routledge studies in sustainable development*. Routledge.**

The second chapter traces the maturation of education for sustainable development from policy to action and elaborates more detailed what is covered in the presentation.



**Wals, A. E. J. (2012). Shaping the Education of Tomorrow: 2012 Report on the UN Decade of Education for Sustainable Development. Paris: UNESCO Publication.**

This report focuses specifically on processes and learning in the context of ESD during the United Nations Decade of Education for Sustainable Development. It is informed by a broad consultation process that includes input from hundreds of policy makers, scholars and practitioners engaged in ESD around the world.

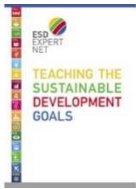


**UNESCO – United Nations Educational, Scientific and Cultural Organization. (2020). Education for Sustainable Development for 2030: A Roadmap and Framework.**

Launched at the UNESCO Berlin ESD Conference in May 2021, this document provides guidance for member states and other stakeholders for the implementation of the global framework called 'Education for Sustainable Development: Towards achieving the SDGs (ESD for 2030)'.

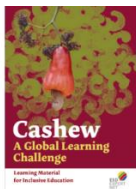
## FURTHER MATERIAL

If you are further interested in knowing more about ESD or if you are looking for a different way to introduce yourself to the concept, there are additional resources available including the ones below:



### ESD Expert Net: Teaching the Sustainable Development Goals

This publication should encourage teachers who teach classes 7 to 9 to integrate the goals for sustainable development within the meaning of "learning about, learning through and learning for the SGDs" into their lessons. Therefore, each SGD with its background is described and illustrated by a "Story of Change" from one of the participating countries. Furthermore, the brochure suggests learning goals and core competencies for students as well as concrete ideas for classes in practice.



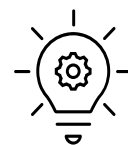
### Cashew – A Global Learning Challenge

This is an inclusive educational resource for the ninth and tenth grade but is adaptable for ESD at other levels as well. The example of the small cashew shows how inclusion and ESD can be addressed at school with a variety of inclusive didactic-methodical ideas from the perspectives of the four countries Germany, India, Mexico and South Africa.

## ASSIGNMENT 1.1 - EDUCATION FOR SUSTAINABLE DEVELOPMENT

After going through the videos and material so far, the participants should develop a fair idea about some of the key concepts of Education for Sustainable Development.

At this point, we request you to reflect upon your own experiences so far:



1) How and when is your work related to ESD? Can you describe a case study in which ESD or aspects of it is informing the work you are doing at the moment?

2) When you think about your work, how would you position yourself in the continuum I described between instrumentalist and emancipatory approaches to ESD?

To gauge your understanding of ESD and the associated concepts, consider writing a reflection piece of about 500 words on what you have learnt so far.



## LEARNING AND SUSTAINABILITY – UNTANGLE THE RELATIONSHIP

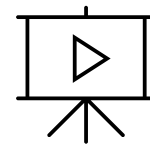


You are now moving to the second part of Module 1, a recorded presentation on Learning and Sustainability.

**Speaker:** Matthias Barth

In this presentation by Matthias Barth, the participants will be introduced to a framework that helps them to systematically distinguish different forms of learning for sustainability. The concept will be introduced, justified and examples out of the praxis of ESD will be given.

You might want to use the Pdf version of the slides to make notes.



[Module 1: ESD and Evaluation Part Two, Learning and Sustainability - Matthias Barth](#)

(Please click on the link above to access the video)

### MENTIONED IN THE LECTURE

- [Prof. Johan Rockström](#)
- Challenges of sustainability by Prof. David Orr
- Three levels of learning for sustainable development – individual, group and societal
- Single loop, double loop and triple loop learning processes
- Emergence of evaluation in ESD

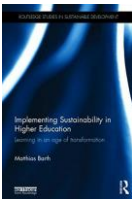
## LEARNING AND SUSTAINABILITY – KEY READINGS

Here again, the participants will find an annotated list of suggested key readings on learning and sustainability. While these are not mandatory for the course, they are essential, as they allow to delve deeper on certain aspects the participants might be interested in.



**Barth, M., & Michelsen, G. (2013). Learning for change: An educational contribution to sustainability science. *Sustainability Science*, 8(1), 103–119.**

In this paper, Matthias Barth and Gerd Michelsen reconstruct the emergence of Education for Sustainable Development as a distinctive field of educational science. They introduce and discuss three areas of sustainability research and throw into relief the unique contribution that educational science can make to individual action and behavior change, to organizational change and social learning, and, finally, to understand transdisciplinary collaboration.



**Barth, M. (2015). Implementing sustainability in higher education: Learning in an age of transformation. *Routledge studies in sustainable development*. Routledge.**

The twelfth chapter, which you find here, engages with the manifold links between learning and sustainability and elaborates more detailed what is covered in the presentation.



**Lotz-Sisitka, H., Ali, M. B., Mphepo, G., Chaves, M., Macintyre, T., Pesanayi, T., Wals, A., Mukute, M., Kronlid, D., Tran, D. T., Joon, D., & McGarry, D. (2016). Co-designing research on transgressive learning in times of climate change. *Current Opinion in Environmental Sustainability*, 20, 50–55.**

This paper reflects on the epistemological context for the co-design of a research program on transformative, transgressive learning emerging at the nexus of climate change, water and food security, energy, and social justice. It outlines a sequence of learning actions and provides some reflections and learning points.


### ASSIGNMENT 1.2 – LEARNING AND SUSTAINIBILITY

Again, I want to ask you to reflect on the relation of your work to what you learnt in this section. Reflect upon how your work enables learning and how that can be positioned in ESD. How would you place and describe this sort of learning?



Again, please take some time to consider and write a reflection piece of about 500 words on you how your work relates to what you have learnt so far and how it is positioned in ESD.

## EVALUATION: A “NESTED GAME CHANGER” FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT

 You are now moving to the third part of Module 1, a dialogue between Prof. Matthias Barth and Prof. Rob O'Donoghue about the emergence of evaluation in ESD

**Speakers:** Matthias Barth, Rob O'Donoghue, Deepika Joon

In this dialogue on ESD and evaluation, Matthias Barth, Rob O'Donoghue and Deepika Joon talk about the emergence of evaluation in ESD and viewing evaluative work as one of the aspects of sustainability learning. They further discuss how ESD and evaluation come together and what that means. They also talk about evaluation approaches, touching how evaluation is a key component in driving the sustainability agenda.



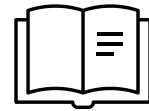
[!\[\]\(cbe2492b119e39e02a1dab2af4a4b296\_img.jpg\) Module 1: ESD and Evaluation Part 3, Emergence of ESD and Evaluation – Dialogue between Matthias Barth, Rob O'Donoghue](#)

(Please click on the link above to access the video)

### MENTIONED IN THE VIDEO

- ESDfor2030 Framework
- Shift in the field of ESD – Evaluation as learning and emerging role of evaluation
- SDGs as framework for fostering evaluation as ESD intervention
- Nested Diagram of Evaluation in, of, as and for SDGs
- Lawrence Stenhouse's focus on learning as purposeful activity

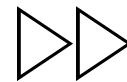
## EMERGENCE OF ESD EVALUATION – KEY READING



**O'Donoghue, R.B., Rosenberg, E., Joon, D., and Krah, J. (2019) Evaluation: A 'nested game changer' for ESE as evaluative processes of learning-led change. Position Paper for a round table panel discussion on evaluation and ESE. San Francisco, CIES.**

The draft paper critiques instrumental perspectives on education and evaluation that emerged within the structural-functionalist bureaucratisation of modern social life in social institutions. It approaches evaluation as nested assessment moments for, as, in and of ESE as situated processes of deliberative, learning-led change. In this way the narrative scopes an expanding evaluation landscape implicit in environment and sustainability education.

### WHAT COMES NEXT?



We hope that you enjoyed gaining newer insights as emerging in the field of Education for Sustainable Development and traced the emergence of evaluation in ESD. In this module, we also took a step back to bring to you the perspectives on instrumentalist and emancipatory perspectives on ESD. We also tried to unpack the relationship between sustainability and learning which has become so critical to our experiences of things in the times of COVID-19 pandemic. With this, the first module of the ESD Evaluation comes to an end. We hope the reflection exercises have given you an idea of the field of ESD and ESD Evaluation and their relevance to your field of practice and beyond. The next module on Evaluation Landscape by Prof. Rob O'Donoghue will go deeper into the emergence of evaluation as an integral dimension of ESD and as co-engaged, regenerative learning and re-inscribed as critical processes of co-engaged learning.



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# SLIDES USED IN THE PRESENTATION

EDUCATION FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT – A REFRESHER PART 1



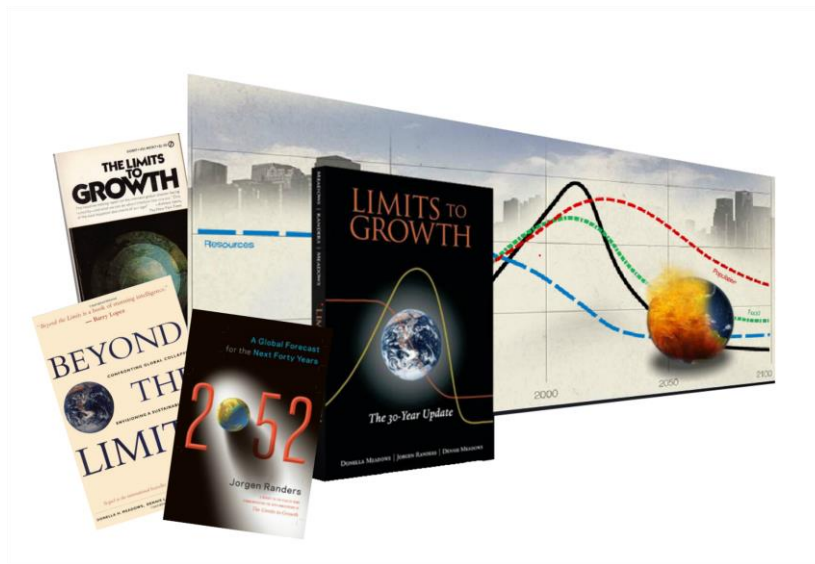
ESD Evaluation Course  
Module 1: ESD - a refresher

## Education for Sustainable Development

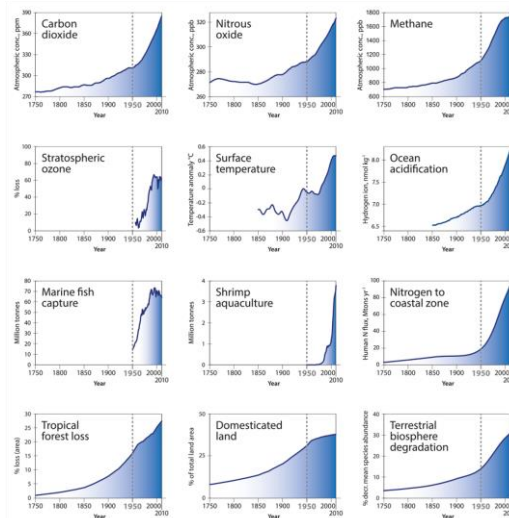
**A refresher**

Prof. Matthias Barth,  
Leuphana University of Lüneburg

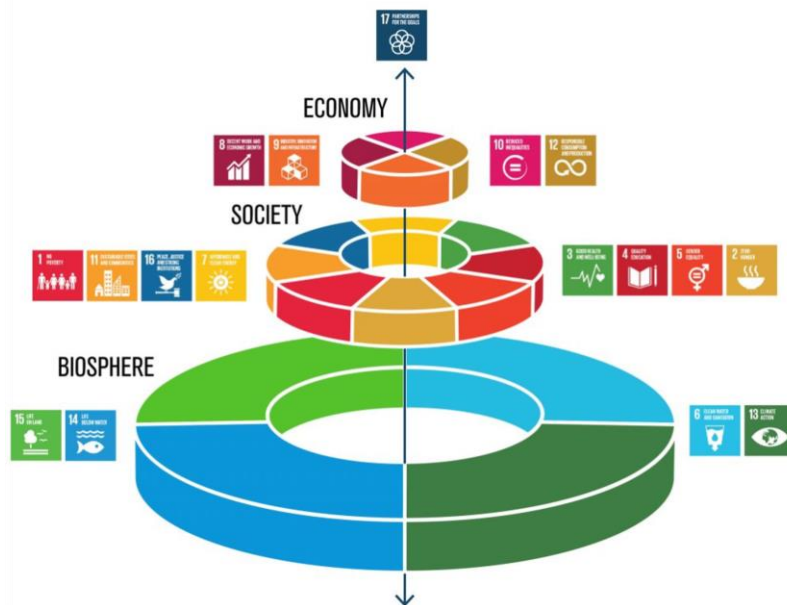
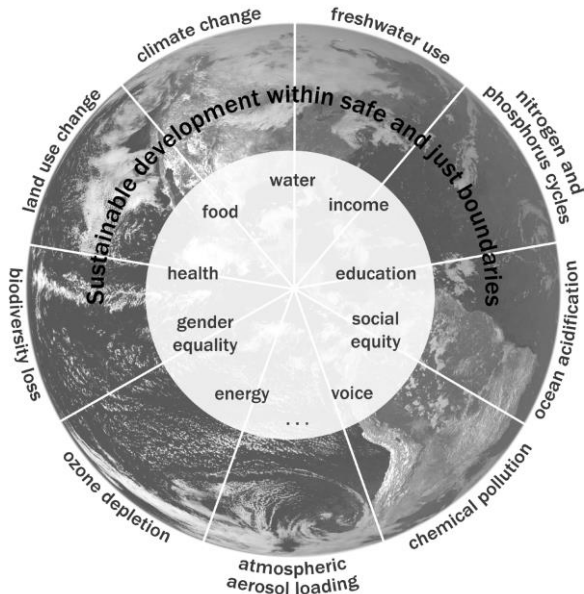




The Great Acceleration.  
Adapted from Steffen et al.,  
Global Change and the  
Earth System, 2004.

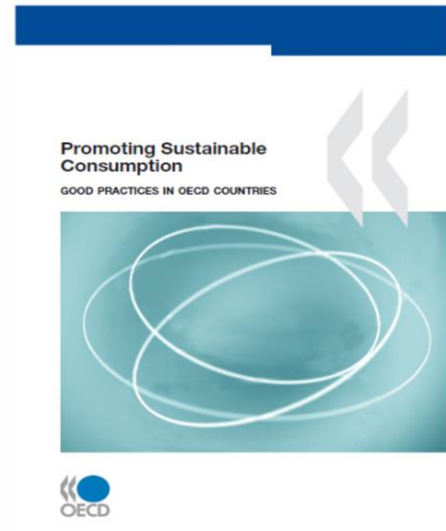


Reprinted from Barth, M. (2015):  
Routledge studies in sustainable  
development: Implementing  
sustainability in higher education.  
Learning in an age of transformation.  
London: Routledge.



## Education as...

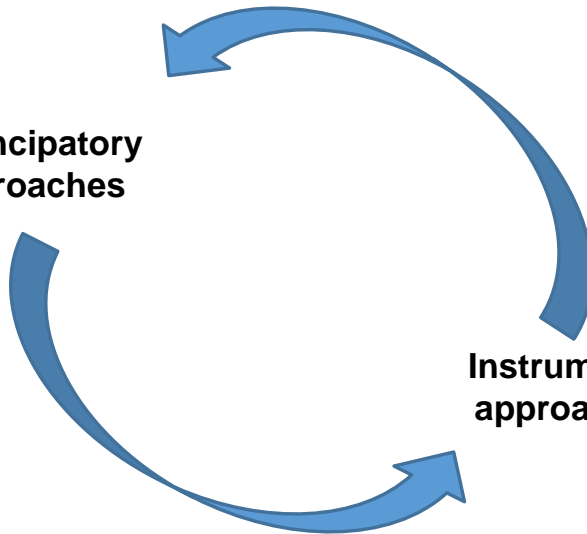
...“one of the most powerful tools for providing individuals with the appropriate skills and competencies to become sustainable consumers”



OECD 2008, 25

**Emancipatory  
approaches**

**Instrumental  
approaches**



**ESD 1**

- Promoting/facilitating changes in what we do
- Promoting (informed, skilled) behaviours and ways of thinking, where the need for this is clearly identified and agreed
- Learning **for** sustainable development

**ESD 2**

- Building capacity to think critically about [and beyond] what experts say and to test sustainable development ideas
- Exploring the contradictions inherent in sustainable living
- Learning **as** sustainable development

# Thank You!

For any clarification, please contact at [esd\\_evaluation@leuphana.de](mailto:esd_evaluation@leuphana.de)



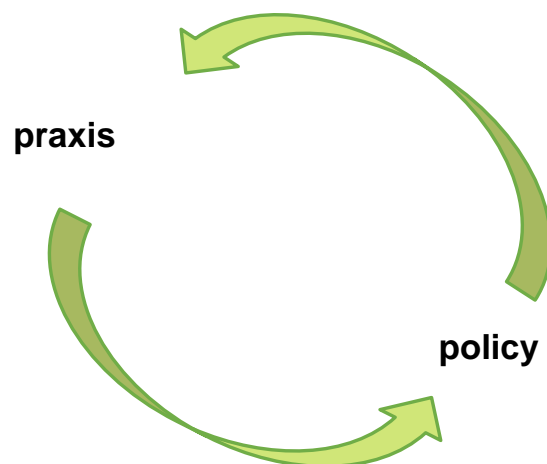
# Education for Sustainable Development

## A refresher

Prof. Matthias Barth,  
Leuphana University of Lüneburg



## Maturation of education for sustainable development

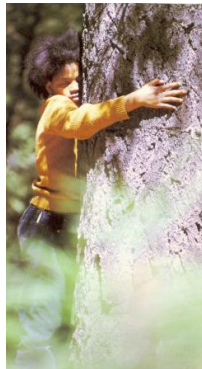


Prof. Matthias Barth, Leuphana University of Lüneburg



## ESD as an educational concept

*educational concepts as responses to  
social needs and challenges*



Prof. Matthias Barth, Leuphana University of Lüneburg

## ESD responds to...

- ... challenges of global change
- ...insights into our dependency  
on natural resources
- ...research pointing out planetary boundaries
- ...insights that we live in "One World" together
- ...the necessity to develop competencies and knowledge  
to act today to preserve and create sustainable futures



Prof. Matthias Barth, Leuphana University of Lüneburg

## ESD offers orientation

- ⇒ is based on a consensual ethical perspective
- ⇒ helps to choose relevant content
- ⇒ offers models to deal with complexity
- ⇒ points towards strategies for a sustainable development
- ⇒ introduces processes that support the development of competencies



Prof. Matthias Barth, Leuphana University of Lüneburg

## Education for sustainable development as a mandate of educational policies and beyond

- The programmatic stage of firm establishment (1992–97)
- The pragmatic stage of practical relevance (1998–2002)
- The stage of implementation and transfer (2003–08)
- The stage of progress-orientation and reflection (2009–13)
- The stage of long-lasting implementation and infusion (since 2014)

Prof. Matthias Barth, Leuphana University of Lüneburg

# Thank You!

For any clarification, please contact at [esd\\_evaluation@leuphana.de](mailto:esd_evaluation@leuphana.de)

Prof. Matthias Barth, Leuphana University of Lüneburg

## EDUCATION FOR SUSTAINABLE DEVELOPMENT – A REFRESHER PART 3

# Education for Sustainable Development

## A refresher

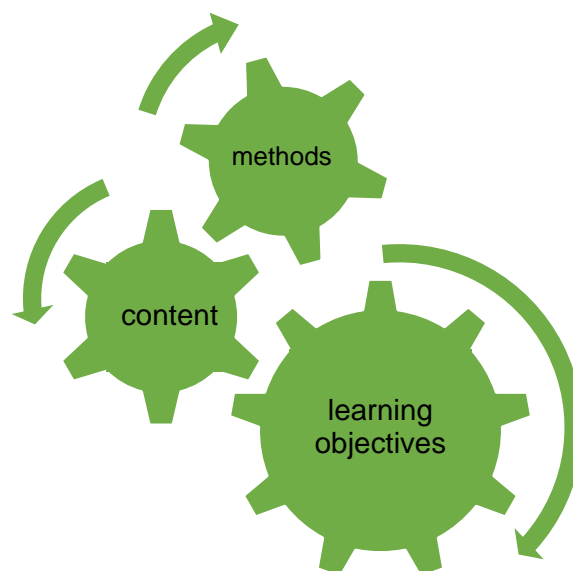
Prof. Matthias Barth, Leuphana University of Lüneburg



expertise  
employability  
citizenship

**Educating future change agents**

Prof. Matthias Barth, Leuphana University of Lüneburg

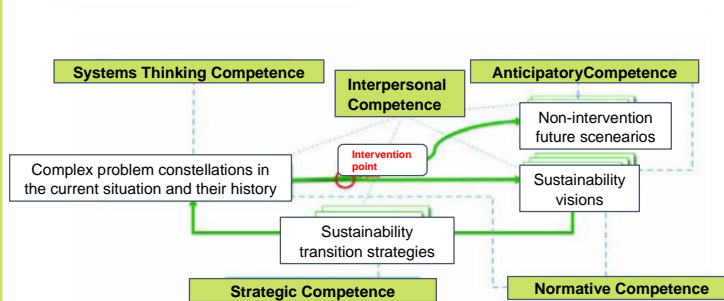
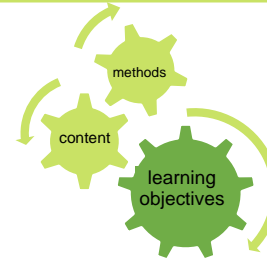


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## Learning objectives



- ....ask the industry
- ....ask the academic
- ....identify core challenges



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## Content

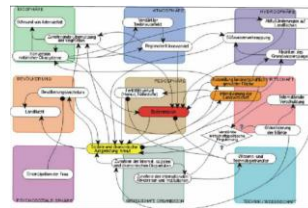


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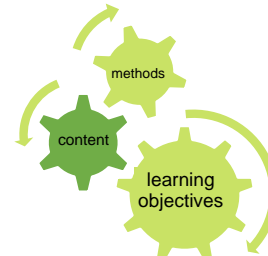
## Content



Tools and heuristics  
from sustainability science



Current topics in  
research or public discourse



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## Content

A framework for the definition and selection of topics in higher education for sustainable development

### Relevance

#### Thematic aspects

Global relevance: number of people affected  
Local relevance  
Relevance in public and political discourse  
Long-term relevance  
Urgency

#### Educational aspects

Significance for students daily life  
Links to previous knowledge and experiences

### Responsibility

#### Thematic aspects

Contribution to negative impacts  
Consideration of general ethical key principles  
Gaps in knowledge

#### Educational aspects

Relevance for the student's future  
Support of students' future scope for decision making

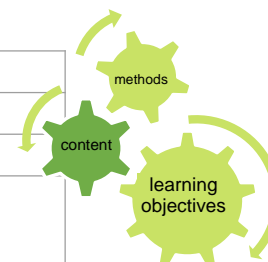
### Opportunity

#### Thematic aspects

Expertise and existing knowledge base  
Opportunities to act on individual/institutional level  
Potential to engage and get involved  
Potential for real change

#### Educational aspects

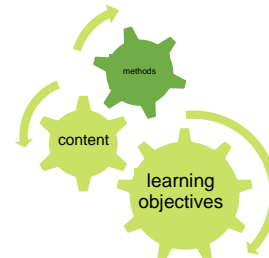
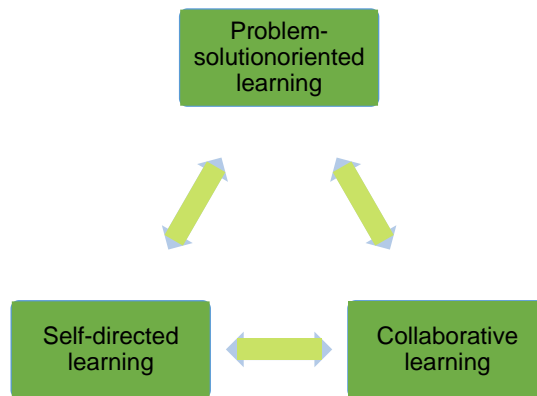
Model character of the topic  
Links to general phenomena or fundamental principles



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## Methods

From teaching to learning



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## Self-directed learning

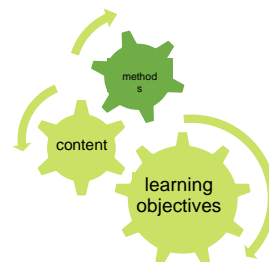


**Active engagement instead of knowledge transfer**

**Active participation in the learning process**



**Change of perspectives: moderator instead of teacher**



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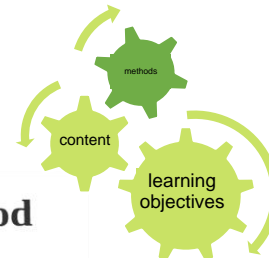


### **Collaborative learning**

**societal relevant knowledge as a shared good**



**participation  
+ collaboration  
+ empathy  
= problem solving  
competence**



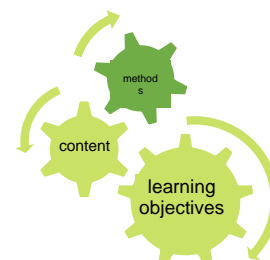
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### **Problem-solution-oriented learning**

**avoids purely "theoretical" knowledge**

**supports the development of action-relevant knowledge and abilities**

**is supported by real-life applications and through multiple perspectives**



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### **Consequences for doing ESD**

- ➔ **How to create opportunities to think about and shape future developments?**
  
- ➔ **How to create learning environments that are participatory and inclusive?**

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# **Thank You!**

For any clarification, please contact at [esd\\_evaluation@leuphana.de](mailto:esd_evaluation@leuphana.de)

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# Learning and Sustainability

## Untangle the relationship

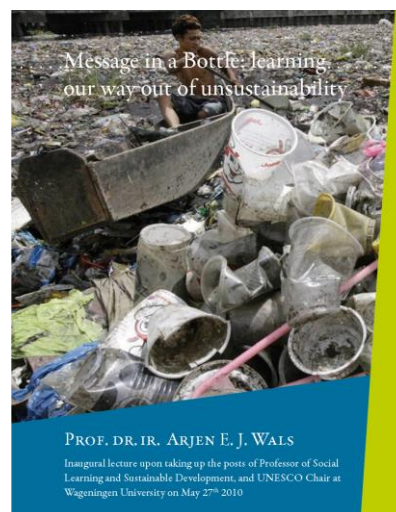
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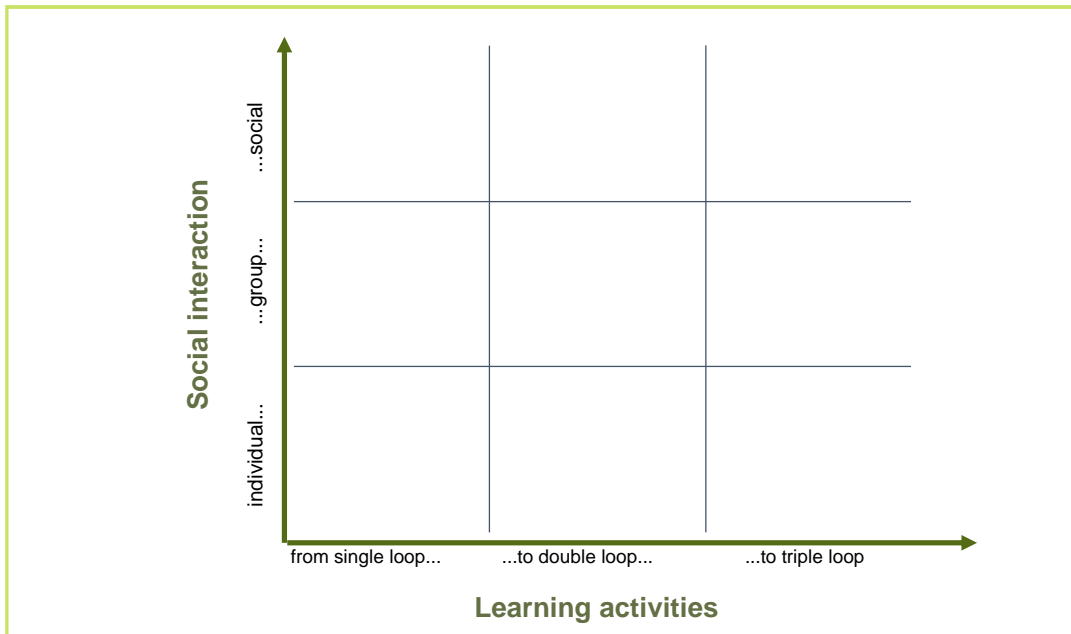
- Sustainability and the challenges of unsustainable development call for a „shift of mindsets“
- Transformation as a learning process

***The question remains:  
Who needs to learn  
what and how?***

Wals, A.E.J. (2010): Message in a Bottle. learning our way out of unsustainability. Inaugural lecture upon taking up the posts of Professor of Social Learning and Sustainable Development, and UNESCO Chair at Wageningen University on May 27th 2010. Wageningen.



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**Social interaction**  
individual...    ...group...    ...social  
→


**Dimension 1: Interaction**

- **Individual learning:**  
Competence development in formal and non-formal settings
- **Group learning:**  
Institutional and organisational change processes
- **Societal learning:**  
Learning through social interaction and reflection

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Learning activities

from single loop ...to double loop ...to triple loop



## Dimension 2: Learning

### Single loop learning:

Learning within a given structure or framework


Change of action or behavior

“following the rules”

Prof. Matthias Barth, Leuphana University of Lüneburg

Learning activities

from single loop ...to double loop ...to triple loop



## Dimension 2: Learning

### Double loop learning:

Learning to think outside the box

Change of strategies

“changing the rules”

Prof. Matthias Barth, Leuphana University of Lüneburg

Learning activities

from single loop ...to double loop ...to triple loop

## Dimension 2: Learning

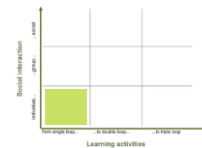
### Triple loop learning:

Learning to reflect on and change context

Change in purpose

“learning to learn”

Prof. Matthias Barth, Leuphana University of Lüneburg



## Individual single loop learning

- Identifying a problem
- Avoiding previous mistakes
- Doing things better

Environment • Climate Change  
**Painting roofs white is as green as taking cars off the roads for 50 years, says study**

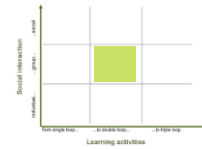
News Center • @NewsCenter • Thursday 10 April 2014 09:00 GMT • 3K views



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## Institutional double loop learning

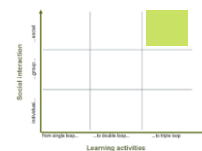
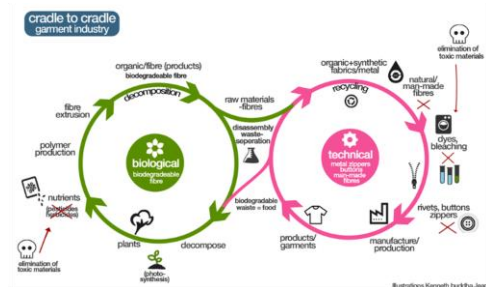
- Reflecting on existing limitations
- Applying new strategies
- Doing different things



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## Organisational triple loop learning

- Identifying core values and objectives
- Inventing new strategies
- Becoming different



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## Sustainability and learning – ways forward

- Failure as part of the learning process
- Diversity as a precondition of reflective learning
- Process—instead of output—orientation

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# Thank You!

For any clarification, please contact at [esd\\_evaluation@leuphana.de](mailto:esd_evaluation@leuphana.de)

Prof. Matthias Barth, Leuphana University of Lüneburg

# TRANSCRIPTIONS

## **Module Introductory video by Prof. Matthias Barth (Video No: 1)**

Link of the video [here](#)

Herzlich willkommen in Lüneburg an der Leuphana Universität. Welcome to Leuphana University in Lüneburg. My name is Matthias Barth. I am a professor of Education for Sustainable Development and I will guide you through the first module in our course which is on Education for Sustainable Development. Together we will look into the concept of Education for Sustainable Development. We will talk about the relationship between learning and sustainability, and what that means for evaluation approaches. I am very much looking forward to enjoy.

## ESD and evaluation, Part one- Refresher Part 1 (Video No: 2)

Link of the video [here](#)

Welcome to the introduction of Education for Sustainable Development, which I call a refresher as I guess quite some of you already know a lot about Education for Sustainable Development or have been involved in Education for Sustainable Development for some time. So, it really is meant as a refresher where you can decide which of these four parts of the first introduction are useful, where you want to dig deeper, where you need to refresh some knowledge, so really get to grasp what Education for Sustainable Development means and what actually means when we think about evaluation approaches. So in these four parts, I want to give you an overview of -Why education when we talk about sustainability? Then we want to look into some of the history and development of Education for Sustainable Development as a field of practice but also as an area of politically supported conceptual improvement. In the third part, I want to talk about some of the key ingredients for Education of Sustainable Development. We will talk about learning objectives, methods that can be used, pedagogies and about content that plays a role. In the fourth part, we are going to try to bring that together and get a deeper look at what this all means.

So, let's start with the first part, and the role of education in the whole discourse around sustainability. And if we do that, the starting point really is to sort of acknowledge the challenges that come with sustainability. And what sort of challenges of unsustainable development we are facing as a society. And this is something that is not really new. I always like referring back to the Club of Rome sort of predictions, where they already in the 1970s started thinking about what does it actually mean to have one planet and not endless resources, but a limited set of resources and how do we want to handle that? So, these planetary boundaries, these outer boundaries of our one planet Earth, which we have, they have been known for quite a while but it's changed over the time the level of insights that we have. We now very much know from a scientific perspective what resources we are overusing to what degree and what would need to be done. So, it's not so much a question of knowledge anymore. So, we can really very well describe sort of the unsustainable developments that are out there. And these unsustainable developments are manifold. You can look into all sorts of use of planetary boundaries, and what you see is the exponential growth over the last couple of decades only where we really lost track from sort of living in harmony with the planet Earth towards and a really unsustainable development. So, planetary boundaries is one thing that describes where we cannot go, what sustainability cannot look like. But this is only one part of the story. When we think about sustainable development, obviously, it is about keeping, staying within these outer planetary boundaries, so not overusing our planet Earth but really to have a sustainable development. It's something that needs to happen within safe outer planetary boundaries and just boundaries. I like the concept that my colleague Kate Raworth will introduce as a sustainable doughnut where we have these outer boundaries, we see the limits that are given to us by the limits of the planet Earth. But we also have inner sort of boundaries when we think about minimum standards, minimum capabilities that each of us now in the present and in the future should have. So minimum standards, like decent income, access to education, gender equality, access to food and health and health care systems. These are all sort of socially constructed minimum standards, but when we think about sustainable development, you know, that is just with our generation and across Generations, we have to take these inner boundaries into account. This leaves us a space. This still does not describe exactly what sort of future we should envision, we should aim for but it leaves us a sort of a development space and area in which different developments are possible, all within these boundaries and all of them enabling sustainable development. So, this is an open space, where this open space also is taken up by policy now. You might be aware of this wedding cake, sort of image of the SDGs, the sustainable development goals, where those inner and outer boundaries really are put into something measurable, into indicators, into goals that prescribe further of what we are trying to achieve. This is what

we are looking at. And if we do, the question is, how can we achieve that? And there are always, there is always this distinction between sort of hard and soft instruments. Hard instruments would be putting up taxes, for example, for everything that is unsustainable, you know, having regulations in place. What you may or may not do, what you must or must not do. So, these are hard instruments, they are effective, but not many people like them a lot. Taxes are something often seen as an intrusion into my own choices. Regulations are seen as an intrusion. So, politicians always hesitate to use these hard measures. Besides these hard measures, there are also more softer instruments, soft measures, communication strategies, for example, but also education. Education is seen as a soft instrument that can be very powerful. Politicians from early on stressed the role of education when it comes to sustainable development. And you see these in a lot of policy papers somehow in a way that at least concerns me quite a bit. So, I just quote this OECD publication, which is on sustainable consumption, is asking how can we foster sustainable consumption and there education is described as I quote "one of the most powerful tools for providing individuals with appropriate skills and competences to become sustainable consumer" and for a politician that must sound great, you know, we have education, we can invest in education, we don't prescribe anything. We have no regulations for the corporate sectors of the richest educated people so they know better, if they know better, they behave better. But this is somehow troublesome for numerous reasons. Because here, education is really, and it's already in the quote, which troubles me quite a bit, education is seen as a tool as something, you know, which I can install, which I can use to make something happen. That is a very instrumentalist approach. And in education, we have a lot of discussion about the differences between instrumentalist approach, on the one side, using education as a tool for behavior change, for example, and emancipatory approaches where the idea really is that we use education to empower people to have a fulfilled life, to aim for what they decide that their objectives really are, and to have sort of the freedom of an individual development. When it comes to sustainability, these two approaches somehow need to be sorted out, a bit more systematically, that they need to be balanced a bit. Probably both of them, you know, have their pros, but also some limitations or some cons, really. Obviously emancipatory approaches, that is something that is very close to my heart, and something that we want to focus most on. But when it comes to sustainability, the question also then is, you know, how much of individual choices do we as a society or can we as a society accept? What if someone decides that he or she wants to be unsustainable? Is that something that is still acceptable and to what degree? On the other hand, instrumental approaches, you know, they have a very simplistic understanding of what education can do. We know the limitations that more knowledge does not always lead to different or even a better behavior. In an approach that is quite common by now, my colleagues William Scott and Paul Vare they came up with a distinction between what they call ESD 1 and ESD 2, Education for Sustainable Development 1 and 2. They argue there are two different types. ESD 1 would be more on the instrumental side of it. There it is learning for sustainable development. It's about promoting or facilitating change in what we do. So, behavior change towards a more sustainable behavior, for example. It's about promoting behaviors and ways of thinking where the need for this is clearly defined and agreed. So, we have an idea of what is better. How should we behave to save energy for example. There, you know, there's some sort of a limited space where an instrumental approach might be useful and could be done, but it really needs to clear define and agree upon spaces. They are there when we talk about sustainability, so they argue that there's also a need for what we call ESD 2, Education of Sustainable Development 2. It's not about behavior change but really about building capacity, the competencies to think critically, critically about and beyond what experts say, and to test sustainable development ideas to come up with new ideas to think outside the box. It is really about enabling individuals to explore the contradictions that are inherent in sustainability living. It's not so much about prescribing what exactly to do, but really, to elaborate what could be done. What other options are there in such learning, as the authors argue, this learning is sustainable development. When you think about that, we probably need a mixture of both. We first and foremost focus on what is here is ESD 2. We want to have critical thinkers. Change agents who can reflect upon what they do, who can make reflective decisions and move things forward. But also, you know, to really be able to think outside the box, to be inventive, to be entrepreneurial and to come up with new ideas. We also in certain spaces, might need the more

instrumental approach of ESD 1. So, there is, you know, there are certain aspects where we know how we need to behave, what needs to be done. So, there is also a space for that learning for sustainable development. There is no doubt about it. It's just limited space and we need to think, what is the most important? And I would argue with Vare and Scott.

That really is beyond what is already known. That is so important, this critical thinking about the unknown as well, because sustainability really in a future orientation, where we really can't prescribe everything but we need to have creativity and flexibility in our approaches. So, when we

talk about Education for Sustainable Development, and what is going to follow, just have in mind that we focus on that capacity building, competence development far more and this really guides us especially when we think about evaluation and ESD in the future sessions.

So far, for the first part, you can continue right away with the second part or pause that, you will find plenty of literature, some key readings about that and I hope you enjoy them and enjoy thinking about me.

## ESD and evaluation, Part one- Refresher Part 2 (Video No:3)

Link of the Video [here](#)

Welcome back!

In this middle part of my threefold presentation on Education for Sustainable Development a refresher, I want to take a slightly different turn and talk a bit about how ESD evolved over time. So, to give you a bit of an understanding of the maturation of that field. I will keep that rather short. There is additional literature on that if you want to dive into the history of ESD. But I want to give some sort of basic understanding.

And, probably the most crucial part for me there would be that if you want to understand how Education for Sustainable Development evolved over time, then you really have to understand the, sort of, the interlinkages between Education for Sustainable Development is something deeply embedded in the practice, the praxis of practitioners who, you know, took that in with existing approaches and further developed that over time. But, also on the other hand as a policy driven instrument towards change. So, there was a strong political will on a global level to include ESD, Education for Sustainable Development, into the discussion and that also shows on many occasions. And I think it is important to understand, sort of, that interconnectedness of these two different drivers.

So, let's take a first look on Education for Sustainable Development as an educational process. That is embedded in what practitioners do for a long time right now. So, if we do that, we have to think about educational concepts as such. Because educational concepts, I would argue, are always responses to social needs and challenges in specific places. This is why we see different developments in different regions of the world. But also, that we see, sort of, different phases through which education or formal education goes. And if we look, and I have to admit that this probably is a bit of a euro centric approach, this is where I'm working at and where I'm raised from, so it's important to acknowledge that as well. It's not only euro-centric, but keep that in mind if you reflect with your own experiences.

So, if I look from a European perspective, you know, we have a long history of strongly environmental focused education. And that comes from the early days where we had more of a nature education, in terms that we, there has been the understanding that nature needs to be understood, you know, you can only preserve what you know. So, education was towards getting to better know the environment, the living environment, biotics and abiotics to better understand what is out there. So, just see that sometimes, you know like in botanical gardens where you have these neat little signs with names of trees in your language, in English, but often also in Latin. That comes from that idea that we need to have more knowledge about the environment, to be able to protect the environment.

This didn't really work out that well. And we've seen a lot of environmental challenges coming up, although lots of investment has been done in that, sort of, increase in knowledge. So, some sort of encounter development, and this is what I try to depict in that second picture here, is more the emotional side of learning, to emphasise that. So, that you have nature experiences, that you go out there. Not necessarily hacking a tree but it's part of it, but really you know engage with the environment, take it all in, get nature experiences, to get a better connection to nature. And, especially in Europe there's been a lot of discussion about you know overcoming sort of the detachment from nature. It was, sort of, a second phase we went through. After that you know with lots of like the most..., early in the 1980s with lots of challenges you know "Waldsterben" that concept of a dying forest in Europe and Germany specifically, with lots of rubbish being found in the environment. There has been an involvement which was about training for environmental awareness. And, on purpose I say training not education, because it was very much towards a better, a right behaviour.

Also, problematic as you can guess, it was really about you know cleaning up the nature, it was about having projects, you know, to make the environment a better place.

In environmental education, after there probably, also again as an, sort of a counter development, there was this phase of more environmental education, rather than training. You know, where it's not so much been about, you know, what should we not do or training for right behaviour, but more of a participatory approach, more of an engaging project oriented what can we do to make our world a better place, sort of things. So that was, sort of, the later 1990s phase of environmental education.

So, you see based on social needs and challenges there are different educational concepts and Education for Sustainable Development is also to be understood as such an educational concept, that is rooted in the understanding of specific social needs and challenges, in a given time, in a given place. So, what does Education for Sustainable Development do? It responds to really the awareness of challenges of global change. These, in the 90s when Education for Sustainable Development came up, there was a growing awareness of global change as something, you know, inevitable, sometimes challenging, sometimes frightening, where we have to deal with. And ESD took that challenge up. It emphasizes the insides into our dependency on natural resources, something that is nowadays often discussed as these planetary boundaries, and really reaching, it was about the awareness of reaching tipping points of planetary boundaries. You know, driven by the research into those, we got a better understanding for that. So, that was sort of the planetary boundaries part, but then there is also been a strong social aspect and these has been driven by the insides that we live in one world together. We only have that world and it's not only about, you know, finding peace with the environment, but it's also about, its strongly a concept of justice. Where it is about inter and intra general justice, which we need to think about. And it's also been driven by an inside in the, into the necessity to develop competences. So, that it's not so much about knowledge only but its competences to act and preserve and create sustainable futures. That was an inside that was very much, you know, also in line with an ongoing, sort of, shift in education as such, where much more of a competency orientation came into. And, ESD from early on contributed to that. So, what makes it a worthwhile educational concept to consider and what is the intriguing part, at least for me, but for many others as well, of Education for Sustainable Development? So, first it really offers an orientation. It's not an add on, this is a strong discussion we all often have, like in schools with teachers who sometimes feel overwhelmed with just a new concept, and I will always argue it's not just a new concept, it's not on top of other things, it really is a different perspective on key issues when it comes to education. And here ESD offers an orientation, because it is based on a perspective which is sort of consensual on an ethical basis emphasizing that important of inter and intra generational justice. It also then helps, and this is important if we think about competence orientation, it helps to choose relevant content. Content on which competences can be developed. It also offers models to deal with complexity, because it brings together the social, the economic, the ecological aspects, and it points towards strategies for sustainable development. So, it gives answers where answers are in urgent need. And it introduces processes that really work. And we now have evidence-based approaches for such processes that support the development of competences. So, this is the huge benefit from my perspective of ESD. So that is the sort of practitioner's side, the praxis or the theory informed practices side of Education for Sustainable Development. But as I said there is also another side, there is also the more the policy driven side. And as I said in the introduction, I don't want to get too deep into that, but I think it's important to have at least a slight idea that there have been different phases, both on a national and a global level, in which, you know, ESD has really been put forward and a lot of, you know, programs, resources, went into that and helped bringing ESD to the stage it is by now. But these phases also changed, so we see some sort of maturation on the policy level as well and I try to depict here a few of different phases, you know, where like in the early 90s after the, after the summit in Rio de Janeiro, there has been that problematic stage where it really brought to the table and there has been a firm establishment of ESD as a concept. Which was then followed by a more pragmatic



stage where it became more and more practical relevant. You know, we set up first sort of lighthouse projects, first models which have been also evaluated to better understand how it works. And it was sort of a trial-and-error sort of phase of bringing in new such concepts. Which then has been taking up in a phase of implementation and transfer, where it's been, you know, how can we spread what we understand about ESD to different educational sector? What can that mean for us? Then, and this came around the end of the UN decade of Education for Sustainable Development, there has been a stage of progress orientation reflection. So, after 15 years into, you know, developing programs, developing ideas and approaches, it's really been about taking a step back and thinking about what works and what does not work and for what reasons and what should we further do? So that was more of a reflexive stage, which now is really coming into a stage of more a long-lasting implementation and infusion. We now see ESD really firmly established as concept, that is a given, and it's now about how can we implement that across all scales, across all different sectors in different regions with sort of place-based adaptations, to make it really, sort of, an integral part of quality education. This is what is, what you will also see in the upcoming years and where we try to contribute to both bottom up, you know, with ideas, approaches from practitioners, but also top down with more policy driven recommendations, support that is happening. So, this is the second part.

What you should take out of this short introduction in history of ESD is really that there are these 2 different parts, that there has been interrelations between them, that you can understand Education for Sustainable Development as a strong educational concept with roots out of global learning, out of environmental education, but that you can also follow that, sort of, evolvement out of an policy perspective with a lot of policy papers that emphasize different stages of maturation in ESD as a concept as well.

Thank you very much for listening to that second part.

## Learning and sustainability: Untangle the relationship (Video no:5)

Link to the video [here](#)

Welcome, welcome to this short presentation where I will try to untangle the relationship between the concept of learning and sustainability as such. Because both of these concepts are really important when it comes to Education for Sustainable Development and evaluation, but both concepts really need to be a bit more thinking deeper, thinking to really understand what they come with and what they actually mean. In sustainability, we often see that learning is sort of seen as a given, you need to learn something to do better, to behave better, to change, but if you really look deeply into the literature, then things are getting a bit more tricky. Because it's not so easy to understand, what the learners actually, what the authors in the publications really mean with learning and how that learning really should take place.

So, let's look into that a bit deeper. And this is in, this is important, because we often see that sort of the quest for the sustainability and the challenges of an unsustainable development, that they call for a what Johann Rockström for example, framed is a shift of mindset. So, we need to really shift, we need to transform somehow individually, as a society, to really get a different approach towards a more sustainable development. And that transformation often is framed and understood as a learning process. Still, for me, at least, the question really remains and often remains unanswered, who needs to learn what and how. Because learning as such not necessarily contribute to sustainable development, as we all know. Because many of the unsustainability challenges as David Orr already mentioned early in the nineties, they really are not the result of, you know, behaviors from uneducated people. They are often, you know, pushed by decisions from the best educated managers, entrepreneurs around the world. So, Arjen Wals once I think, rightfully made the point, isn't it that we rather need to unlearn unsustainability than to learn sustainability? And, I think that is an interesting point and if we try to think about that, it really helps to get a better grasp, a better concept of what sustainability learning actually might mean. And I try to do that in one of my publications, they do what academics like to do, I put up a matrix and I want to introduce that matrix to you, because I think it is actually something really, really useful and I hope you will find it useful as well. So, let's look into it. Within that matrix I basically distinguish between two different dimensions of sustainability and learning.

The next level is not so much concerned about you and me anymore, but it's really questioning how can groups learn together. Not as only as a group of individuals and we are still looking into individual learning but really, you know, can a group as such also learn? And there it is often about institutional or organizational change processes. When an institution decides that, let's say in a higher education institution, decides that it will take up the challenge of sustainability and try to better contribute to sustainable development. This really needs group learning, so the organizational, the organization itself needs to learn. And this second sort of level is really concerned with that. How does that happen? What does that mean? But it's not only groups that are learning, it's not only organizations and institutions, it's also us as a society and we can look into that sort of processes that can be described as societal learning. That is learning that happens through social interaction and reflection. So that we as a society decide that we want to do something, or do not want to do something anymore. As societal learning, for example, in Germany, when we decided to stay away from nuclear power as a source of energy, you know, that was a learning process. There were lots of interactions, lots of discussions, reflection on the pros and cons and then this decision was made.

So, these are different levels of interaction in that first dimension. But this is only one part of the story, the other part is concerned with the learning process as such. So, what is happening when we talk about learning? And here I quite like the distinction between Single, Double and Triple loop learning. So, what does that mean?

Let's look into that a bit more in detail.

Single loop learning is learning within a given structure or a framework. You do single loop learning if you, for example, you failed an exam. Imagine you're in higher education or in school and failed an exam. So, what do you do? You change your action or your behavior, you try to work harder, you try to start learning earlier. So, you change something, you change your action but still following the rules. So, you're not questioning the test or the exam as such but you're trying to do something different. This is single loop learning.

Double loop learning is going one step further. There it is to learn, there is about learning that is starting to think outside the box, so to say. Here you're changing your strategies, you're changing the rules. So, you're trying not only a sort of adaptive behavior but really a fundamentally different strategy. The way you are learning, for example. So that you're not learning on your own and you try just to work harder but that you decide that you will have a partner with whom you're learning and you're trying to test each other and so you're trying a new strategy. This is double loop learning. So, it's more reflective and you're trying to change the rules. You're doing things differently. You are really starting to change these strategies. That is the second level and then we're also talk about a third, even further advanced level, that is triple loop learning. Here it is about learning to reflect on and to change the context you working in. It's really a change in purpose, you're trying to learn, to learn. So, the fundamentals, what really drives you in your learning process, are reflected upon and they are changed. Might be something where you are considering what are the core values? What is the one important thing? And how can I, by doing something very differently, very different things, how can I still achieve that purpose? So, this is something to do with sort of the level of reflection, and the willingness of change that you instill into your learning process. Here, we distinguish between single, double and triple loop learning. So, let's look into some examples when it comes to sustainability, to give you a bit of a better sort of idea of what that means. We can, for example, then use such a matrix and we see that with the small boxes, which I colored, you know, in the very left, bottom column, you can identify individual, single loop learning. So, the learning part is single loop and it's the individual who learns. There it is about identifying a problem, it's about avoiding previous mistakes, and doing things better. And we see that, and this is for me, a fine example of that is when people come up with what is sometimes called this geoengineering approaches, you know. You face a problem, as tremendous as climate change, but you don't really want to change things fundamentally. You're trying to avoid previous mistakes. And so, you come up with solutions that, you know it might help against climate change, it might help you know, to paint roofs or roads or houses white, because then the impact of the sun is changing and it helps cooling, it helps cooling down the environment. So, you're trying to do things better but you're still doing the same things. That would be a fine example of individual single loop learning.

If we go on further and think about an example of double loop learning, then institutional double-loop learning, and I quickly already refer to that, is a fine example. Here you reflect on existing limitations and you are applying your strategies, so you're really trying to do different things rather than just doing things differently. And the university I'm coming from, Leuphana university, is an example of that, and there are other such institutions out there, you know, where starting to think about the impact one has, one institution has, really helped to apply new strategies, you know, and applying a strategy of sustainability management within an organization, with a lot of impact in different areas research, teaching, management of resources. This really would bring new different strategies, and new things to the ground so things really are changing within an institution, is constantly reflecting about what can we do differently, what

different things can we apply, to limit our impact, our negative impact on the environment and to have more of a handprint positive impact instead. That would be double loop learning of an institution, as some sort of a group.

Also, on the sort of the group level, when you look into an organization, you could, with your learning part, you could go even further and say, what would it then mean if an organization really starts triple loop learning? And this is about identifying and, I refer to that already, identifying core values and objectives. So, what is it at essence, you want to do, as a company, for example, what is it that you really want to do, and then you start inventing new strategies and becoming different, not just doing different things but becoming different. And here I think, some of you might know that, one of the examples out of circular economy the cradle-to-cradle principle for me is a fine example. And a lot of companies from the corporate sector apply that now, and it really changes the whole business model, you know. This is one example for me, it would be from a company that produced carpets and they tried to identify what are the core values and objectives we have, and it's not selling carpets, you know, it's contributing to a home where people like to live where they feel comfortable, where they feel clean and safe. That was sort of the core value that this company identified. They said, okay, how can we do that? People need carpets, but no one is breaking about having a carpet, it's just something that needs to be there. So why not changing our business model from producing and selling that to renting it out? So, they changed their whole strategy or they invented a new strategy, so that they are now renting carpets, they are producing them in a way that it can completely be recycled and reused, you know, sort of in circular economy approach. And so, they can they can provide, you know, highest quality, healthy, clean sustainable carpets. And their sort of business model now is a renting system rather than a producing and selling and reselling it. So, this really is an example of such a triple loop learning process, often we go in this organization, which fundamentally changes how the organization's acting. And these for me are examples, you know, to better conceptualize what we are talking about when we are talking about sustainability learning. And I think that is important and you will tackle that if you think about evaluation as ESD sort of approaches. But you know, when we talk about evaluation of such learning processes, that we really understand that we conceptualize what learning of who we are talking about. And if we do so, then there are sort of some underlying consequences in there as well, which I just want to quickly point out and we will come back to them when we talk about evaluation concepts a bit more in detail. Because when we think about sustainability and learning and how can we foster such learning, how can we support different forms of learning of different, you know, individuals and groups. Then I at least in the last part want to point out three things. One is that we have to accept and understand that failure really is part of the learning process. So, we need to create processes and we need to create environments where failure is not seen as something that must not happen. But that, you know, when you try new strategies, when you try out new things, that is naturally occurring, every once in a while. I mean we want to limit the number of failures, obviously, but we are accepting that we can use it as a learning resource as well.

Another aspect that is very important when it comes to that, is that the diversity. The diversity of Learners really is a precondition of reflective, and therefore, for deep learning. So, we strive for situations where we can not only encounter but really, you know, use diversity, diversity of learners, of opinions, of approaches, of ideas. It's something that will better our learning processes. And the third one is, and this also will later on in evaluation will be very important, that we do have a process orientation. You know we focus on processes, processes of learning rather than only of outputs of such learning processes. Often an evaluation has that, and Rob will talk more about that in more detail, and so will Eureka do. We often ask what is sort of the output and how can we measure that. And the more the better, the more profound, the more detailed the better. And we try to measure that. But we forget about the process. And if we understand such reflective sustainability learning, we need to refocus also on the process of learning processes as something very important. Where also evaluation, for example, would ask, you know, how can, what different stages of a learning process, for example, exist. And how can we make use of them?

So, so far from my side is a really quick overview or a quick input, on the relation between sustainability and learning. I hope you enjoyed that, you can read more about that and we will use that within our course, really, as a sort of underlying conceptual understanding when we give, we go into detail with different evaluation approaches.

Thank you very much for listening.

### Part 3 Evaluation: A nested game changer for SDGs (Video No: 6)

Link to Dialogue Video [here](#)

#### Deepika:

A very warm welcome of all of you. Today it's a very special occasion. We have a first dialogue on ESD and evaluation. And for this we have Prof. Matthias Barth from Leuphana University of Lüneburg and Director at the Institute for Sustainable Development and Learning in conversation with Prof. Rob O'Donoghue from Rhodes University in South Africa.

We are very glad to have these stalwarts of ESD for the first conversation and I hope you really enjoy the conversation.

Over to Matthias.

#### Matthias:

Thank you Deepika. And great to see you Rob, I hope you're doing well, it's a pleasure having you here. Really having the time to discuss a bit these issues of how ESD (Education for Sustainable Development) and evaluation may come together and what that means. So, if we can expand a bit on that I think that it's great and it's about the time to really engage with these topics as we see if we talk about sustainability, my feeling is that learning is considered as increasingly important and is used as a concept quite a lot. We have sort of a renaissance of concepts like confirmative learning, we see social learning coming up again, but often I really can't overcome that feeling that it is used somehow arbitrary and as a buzzword. That concerns me quite often and I think it is worth to have really a careful consideration of what that actually means and how that comes together.

So, this is learning on one side, but we also talk about evaluation, and for evaluation approaches I think you put a lot of thought into that and in what sort of evaluation might help us on the sustainability agenda. So, I'm really glad to have the chance to talk more about that with you.

So that would be my first question then: How do you feel like, what role does evaluation play these days in sustainability science and what role should it play?

#### Rob:

It's lovely to be with you, it's a lovely day here in South Africa. It's a really tricky topic. When I first started in evaluation, I got this tremendous shock because I was asked to evaluate a programme because it had been evaluated and the participants came to me and said: but it doesn't reflect the learning. And it's not us and it's not showing things the way they are. So, I went and looked at the work that was done and it was a good evaluation, but the participants were not included and nor was their learning. Evaluation was just looking at the end of the pipe. And that started me off in evaluation and I conducted in the 1990s, you can imagine, some time ago, I conducted a participatory evaluation and it wasn't really accepted at the time. You know, some people thought oh that's very novel, actually asking the participants, but then you want to do it scientifically, where you actually just look at the outcomes, you know: how has the behavior changed.

And since then, with ESD it became clear to me that we were living in a different world. And the old scientific ways of doing evaluation are not relevant any longer. They are particularly not relevant because learning is involved. And you can't measure learning by looking at the end. You've got to be with people, together, and on a learning journey to be able to look at that. Of course the end point where you get to is really important.

But this was the main shock and the main shift that started me working on evaluation. You have to evaluate with people, and the key question that came up for the course is: What are the participants evaluating? Because still when we think of evaluation, we're thinking of someone coming to do measurements. You're not thinking of, goodness its ESD, so the participants are involved in evaluative learning. And that's what opened things up for me.

**Matthias:**

And I think that is still very timely and we will see an - because we have these two pressures is my impression. I mean going out of the Decade of ESD into now the ESD for 2030 programme, obviously, you know, lots of resources, money went into different projects, so politicians, they want to know what is sort of left at the end, what impact can we make, and other ways to make a better impact in other ways.

And so, they always, or quite often, found this trap of, we need indicators, we need clear evidence and then this is a certain way of evaluation. And it's great and I really want to look into with you into sort of different options and scenarios how that can be done and we will come to that in a bit.

Maybe, could you give our audience a bit of an overview, of, then, if we look into the evaluation landscape, when it comes also to Education for Sustainable Development (ESD), what different types and options are there?

**Rob:**

Yeah, it's really an adventure playground - was a term that one evaluation used, you know that we can now be adventurers, we can be creative, we can approach things in a different way. And my colleague Eureka at Rhodes whom I have worked with for many years, now she came up with the idea of CMERL, where things are much more inclusive and, in her terms, she was looking at collaborative or co-engaged was the term that I used, so you're working with people, that was the first starting point. And then monitoring evaluation in South Africa, there was a large push, money came in, people had to account for the money and governments were looking for outcomes, so monitoring and evaluation became important. But Eureka said, well, what is the evaluation for, it's to allow reflection and actually to produce learning, you see. So that you're able to learn, to make things better, to move along. So that's CMERL approach was a very important sort of turning point.

But in the work that we were doing, with the ESD expert net, it became clearer that we needed to deepen that. You know, we needed to actually look at: how has society changed? Society is much more evaluative now and if you read psychological works, they talk about how in society, you can't really live without constantly evaluating. Evaluation is part of life. And evaluation and learning are kind of co-mingling. Okay.

And if we're teaching an ESD programme, we're not so much concerned with our ideas, we're concerned with what are the participants making of things. So, we're inviting them to evaluate a situation, we're inviting them to do that together. And that means that evaluation and learning are co-mingling. And if we start looking at, oh, we need to account for things by looking at the end of the pipe, we actually miss the main part, which is the action learning work. And if the action learning is not happening, then the end of the pipe is a methodology, so the shift has happened much more to evaluation is about the learning, okay? It includes the participants and particularly for ESD, we need to see it as an evaluative process and I think that's been a challenge and that's the focus of this particular programme.

**Matthias:**

Exactly, and this is, to be honest, what also attracted me with this idea of bringing ESD and evaluation closer together. Because one thing would be to better sort out the evaluation. And you talked a bit about the tensions we see there and how we might overcome them when it comes to evaluation. But the great potential I see here now is if we really think



these two concepts together, that it can also help to further develop the learning and the educational part. And this is my understanding of what you framed within that concept that you also wrote about “Evaluation as a nested game changer”. And I think that was highly interesting for me. And maybe you can elaborate a bit about that concept? What makes it a nested game changer? And where do we go then?

**Rob:**

Year, its actually very tough to open up new spaces because as soon as people think of evaluation, they look at: Has the behavior changed? Okay? So, we had to play with metaphors. Okay? And one of the major force we played with was the cup and saucer. You know? So, what have we got in the game? Well, we've got the SDGs, okay? Then, you've got the people that are involved. We've got what they're doing together and then what's coming out of their doings. And that reminded me of having a cup of coffee with a friend, you know? So, we played with metaphors to open up our thinking. Because we have to re-learn to think about evaluation in different ways when were thinking about ESD. And then the notion of a nested game changer was when in our thinking when we we're working as a small working group, we started to see, well, evaluation and ESD or ESD and evaluation – they're kind of like interchangeable. And they moved in together. Now the danger with that kind of thinking is you can collapse it. So, we developed this little model of the nested game changer. So, you had the SDGs which was a tool FOR evaluation and then we had the conventions OF evaluation, you know, you want to evaluate something, evaluation OF ESD. And then in the middle you have to fit in the learning and the people. The processes and the people. And that idea of the nested game changer became really just an important metaphor, the tool for thinking about: If we're going to be involved in evaluation and ESD, we have to see it nested but we have to see that we're in a changing game. And in this changing game, it's not one old convention as the gold standards, there many different and integrating and inclusive ways of going about this. And therefore, the idea of the creative space for the people to work together. And evaluation becomes more central, more important and a driver of ESD as well as a way of being accountable to governments and states and outcomes that are productive. So that's how we just play with metaphors that actually open that up for us. And I hope that the participants in this course will have plenty of opportunities to play their situation, to be creative and look at how metaphors help us to approach things differently and more deeply.

**Matthias:**

Definitely, and I can only invite our audience really to engage with this idea, with that also that paper where you elaborate a bit more on that, to see that as a creative starting point. Maybe to give a bit of an understanding for our audience, where that could lead to? Maybe you could bring a few examples out of your vast experience also in your evaluation work. How does that change things? How does that change actions we are anticipating and applying?

**Rob:**

Yeah one thing that I've learned is to work together. You know that's a key principle of ESD. And when you look at evaluation of ESD, in ESD, as ESD, for ESD, it can become a bit of a muddle. You know. Because they're not separate. And what is necessary is this opening up processes and the key question to me, that I always ask, is: Who is evaluating here? And who has been evaluating because its ESD? Have been the participants. What evaluation has been done? To actually generate the learning that is going to produce the outcomes. And what one ends up then is with the notion of process evaluation. You know, so you can have a formative stage, you can have a process stage and you can have a summative stage. And this is what we try to capture in the paper. The paper is a continuous process, because as we come up with examples, like I've just completed eight little videos to try to explore the ideas of the paper and each of

those videos I try to give an example. So, I draw on an ESD as an evaluation process. And then you can see, when you look into it, you say okay, which situation is this then? Who is involved? What's happening here? What learning is associated with it? What are people saying about it? How could we make it better? So that it becomes sort of like a generative space of co-engaged work rather than an expert opinion that is backed up by "my methodology is sound". I didn't ask anyone anything, I just went to measure the way it is so you can believe my evaluation. That was the 1990s and people are still stuck in that space. And you need to read the paper to explore and open up the idea for ESD evaluation has to be a nested game changer. And it should be a lot of fun to be working together and to be exploring these ideas. The paper never stopped to be written. When I was doing the videos, I thought we could write more into the paper. The paper is really just a starting point. It's an invitation to explore and I think that's what the course will be about in my estimation, I really hope for that kind of interaction.

**Matthias:**

Yeah, I hope so too and I'm really looking forward to participants bringing their case studies also to the course and then that we can play around, that we see how that works out. So, I think there are many ways and pathways to explore and that might shake up things quite a bit. What I was wondering now given the situation we are in right at the moment, and I'm not so much talking about ESD for 2030 framework and you know what sort of needs to be done there and could be done there, but I mean we also, we are living in times of change right at the moment. And we see lots of challenges for us as society. What is your take on the potential that you know, such an sort of further developed understanding of ESD and evaluation brings these concepts together. This is something that also could contribute to that search, the quest of society for building back better, sort of approaches, building forwards better approaches, in a post-corona time.

**Rob:**

I think the key thing is to be able to work with multiple perspectives. So, if you take the SDGs as an example, there are goals that are specified okay? But we don't use it in teaching and learning as goals and then look at: Can we measure the goals at the end? Because it's a process. So, we keep the goals in mind and there was Lawrence Stenhouse. when he was looking at the problems with education and the setting of objectives. He said, education is a purposeful activity. We have to approach it with outcomes in mind. And that's when we change from behavioral objectives to outcomes. And we have to be able to approach it with goals in mind. And the SDGs is a very useful starting point. But at the same time, we have to be able to work out of a context. In your case, if we were looking the side of the question what's really interesting to me, is the decolonizing side. You know? We definitely need to move away from colonizing approaches to evaluation where people come in, they test and they share the results without consulting with people. It has to be inclusive, it has to be participatory. And that is how community is created. And where you started in this conversation was very important. And where you're opening module is, it's around learning. Okay. And learning is a social process, learning is what happens when people come together to invest time and ideas and try things out together. So, it becomes a purposeful growth process that Vygotsky talks about development, he talks about people develop working together, with ideas and that is a very important perspective. You know, to actually be able to draw on theory and to explain how the theory plays out, around learning. So, it's really an open arena, and we have to be conscious of histories of exclusion. Now that's why evaluation became a really interesting space for me, because I'm in South Africa and there are histories of colonial exclusion and working in indigenous knowledge. So, you can't have a classical science-based measurement approach to evaluation, it's just another colonial intrusion. You have to be able to work together, to de-center, to contextualize, to trust each other and to be able to explore positive actions that bring hopeful futures.

**Matthias:**

Yeah, totally, I couldn't agree more. I think that is a super important aspect and although I see that this will be a bumpy road, this is quite some change, a fundamental paradigm shift underlying which needs some deep reflection on many levels. But I think and that would be my hope, that also with our course we developed together, this really could be sort of a starting point for some and some little seeds that could grow into such a change of re-thinking the way we bring evaluation and ESD together. So, I think that is a fantastic opportunity and I'm very much looking forwards to work a module with you but also with participants who will bring in richness on different perspectives or cases.

So, thank you very much, that was, I think that was great starting point. And we will see how we can work together with our participants to further deepen that and really reflect on that.

**Rob:**

Thanks, it's been lovely a journey.

**Deepika:**

Thank you so much Matthias and Rob for such an engaging, insightful conversation. I'm sure our participants are going to learn a lot, and personally for me, it has been again a learning moment for me.

Thank you so much.

### About the Author

Matthias Barth is Professor of Education for Sustainable Development and serves as Director of cross-faculty Institute for Sustainable Development and Learning (ISDL) at Leuphana University of Lüneburg in Germany. Matthias is adjunct faculty member at Arizona State University in United States of America. His interest in research is on the intersection of sustainable development and learning in formal and in-formal settings. Matthias Barth has published widely on teacher education for sustainable development and on the development of sustainability key competencies in higher education. He serves on the advisory board of Copernicus Alliance and is coordinating the German Network of Teacher Education for Sustainable Development. He is member of ESD Expert Network. In September 2021, he joined the Eberswalde University for Sustainable Development, Germany as its President.

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This module has been designed by team of student assistants Anwesa Goswami, Carolin Ellerkamp, Charline Rieffel, Edali Beltran, Johanna Philipps, Maxi Baumert with support from Deepika Joon, Ludwig Chanyau and Jennifer Krah.

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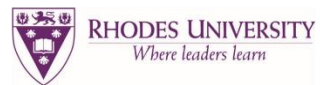
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