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# Capacity building for transformational leadership and transdisciplinarity

*Two new academies support future change agents: The Postdoc Academy for Transformational Leadership is designed to develop the next generation of leaders in sustainability and transformation research. And the platform tdAcademy aims to be a continuously evolving knowledge base for transdisciplinary research.*

Matthias Barth, Andrea Bruhn, David P. M. Lam, Matthias Bergmann, Daniel J. Lang

## Capacity building for transformational leadership and transdisciplinarity

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Sustainability science as a mode of use-inspired basic research (Clark 2007) calls for new approaches to research addressing the manifold challenges of social-ecological systems (Lang et al. 2012). Scholars in sustainability science increasingly call for interdisciplinary and transdisciplinary research approaches that are problem and solution oriented and involve practitioners and researchers from different disciplines alike to better understand complex social-ecological problems (von Wehrden et al. 2018, Miller et al. 2014).

Such research approaches require specialists from multiple disciplines who are able to balance disciplinary expertise with proficiency in inter- and transdisciplinarity and knowledge integration which in turn necessitates new skills, structures and institutional support (Fam et al. 2017). New and targeted educational – or more broadly capacity building programs – are needed to empower change agents accordingly (Gordon et al. 2019).

### Transformational leadership in a transdisciplinary environment

Lessons learnt from experiences with inter- and transdisciplinary research in sustainability science are now available, arguing what is needed to address complex social-environmental problems and to better prepare the next generation of academics in

sustainability science (Schmidt et al. 2018, Görg et al. 2014, Fam et al. 2020). This need is also increasingly acknowledged in educational formats in postgraduate education which emphasize approaches across disciplines and epistemological perspectives (Lyll and Meagher 2012). At the same time, the manifold tensions that come with such research approaches are stressed. Dana Fam et al. (2020) identified tensions of individual versus team expectations and outcomes, disciplinary versus inter- and transdisciplinary outcomes, and learning versus research objectives as particularly challenging.

Early career researchers (ECRs) who are striving for their place in academia in sustainability science face one particular additional challenge: finishing their PhD and getting a tenured position. This challenge is the tension that exists between traditional expectations of the academic system with its metrics and indicators and the increasing demand for socially relevant research and outcomes and thus a very different kind of impact. To best support such future change agents calls for formats that enable capacity building for transformational leadership in which mutual learning from and with peers is encouraged, which encourages space for reflection and fosters steps to become more autonomous and self-responsible.



In what follows we want to introduce two formats designed by several partners that explicitly address this tension and are targeted for postdocs who are aiming for a career in sustainability science and in the second case also for advanced researchers.

### The Postdoc Academy for Transformational Leadership

The Postdoc Academy for Transformational Leadership is designed to empower the next generation of leaders in sustainability and transformation research. It is an initiative of the foundation Robert Bosch Stiftung, jointly run by the foundation and four ac-

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ademic centers: Humboldt-Universität zu Berlin, Leuphana University of Lüneburg, the Stockholm Resilience Centre, and the Dutch Research Institute for Transitions (DRIFT) in Rotterdam. The *Postdoc Academy* targets early-career researchers from European research institutions with an excellent research profile and enthusiasm for transformational research. Applicants should be “intrapreneurs”, who initiate positive changes and innovation within their institutions and strive for an academic leadership position.

The core of the program is four seminars that take place over two years. One seminar is held at each of the four academic centers, according to their respective areas of expertise. The seminars build upon each other and are complementary:

**Seminar 1** at the Humboldt-Universität zu Berlin is entitled *Transformations in Human-Environment Research*. It introduces participants to the fundamentals of philosophy of science and different modes of knowledge production in order to develop their capabilities for inter- and transdisciplinary research throughout the whole program.

**Seminar 2** at the Leuphana University Lüneburg is focusing on *Transdisciplinary Research Environments and Transdisciplinary Learning*. It explores the opportunities and challenges of transdisciplinary research, and encourages participants to individually reflect on their own profile and portfolio as a researcher.

**Seminar 3** at the Stockholm Resilience Centre is on *Transformative Capacity and Agency for People and Planet*. It introduces resilience thinking and the social-ecological system perspective, both of which are deeply rooted in complex systems theory.

**Seminar 4** at the Dutch Research Institute for Transitions is on *Social Innovation and Local Experimentation for Transformative Change*. It allows participants to build on their transdisciplinary research practice by deepening their understanding of sustainability transitions and transition governance.

The seminars are linked by four thematic modules that create an overarching framework and are addressed in each seminar to offer a continuous learning experience:

**Module 1, Focus Topic**, engages with sustainability science as a research field. It presents challenges for theory and methodology and how to cope with them using examples from the year's focus topics. Past focus topics have included food systems/sovereignty (2018), scaling sustainability (2019), and land use systems in a globalized world (2020).

**Module 2, Systems Thinking**, aims to increase participants' understanding of how complex systems thinking is used in transformation and sustainability research. Participants discuss how change can be navigated in this field.

**Module 3, Transforming Research Methodology**, deals with theoretical, methodological and process-oriented questions related to transdisciplinary research, such as quality criteria, mutual learning, and integration. It also addresses the challenges researchers face in these processes as well as the idea of “undisciplined” career pathways.

**Module 4, Developing Capabilities and Careers for Transformational Leadership**, discusses how participants can develop individual and coherent research profiles that will help them develop competence in transformational leadership.

Within this structure, the program also creates a platform where participants can engage with established group leaders and change-makers from inside and outside the *Postdoc Academy*, thereby building a strong network of expertise. The program also offers seed funding for activities such as initiating research collaborations. It enabled, for instance, the postdocs of the first cohort to meet regularly and plan publications in journals like *Nature Sustainability*. The postdocs of the second cohort received support to present their work at the *International Sustainability Transitions Conference* in August 2020.

The *Postdoc Academy for Transformational Leadership* has initiated a new program cycle with 20 participants each year since 2018. The third cohort of participants will have their first seminar in October 2020. The fourth call for participants will open in December 2020.<sup>1</sup>

This way, a network of promising leaders in sustainability and transformation research will be established over the next few years. This network is expected to play a significant role at the interface of science, society, and policy at the national and European level.

#### Fellowship program and capacity module of the platform *tdAcademy*

The recently established platform *tdAcademy*<sup>2</sup>, initiated by the Institute for Social-Ecological Research (ISOE), Leuphana University of Lüneburg, Oeko-Institut and the Center for Technology and Society (ZTG) at the Technische Universität Berlin, aims to be a continuously evolving knowledge base for transdisciplinary research, as well as a platform for its global community to reflect on existing concepts and methods, discuss the latest insights, and develop new ideas. Accordingly, the *tdAcademy* has three objectives:

- First, consolidation and further development of the state-of-the-art insights concerning four issues relevant for transdisciplinary research: societal impact, scientific impact, context dependencies, and new formats.
- Second, providing high quality capacity-building opportunities (e.g., summer schools or workshops) for transdisciplinary researchers, especially at the early-career level.
- Third, supporting and further developing the global transdisciplinary research community by providing a space for exchange, reflection, collaboration, and new ideas.

ECRs will play an important role for the *tdAcademy* because they are at the leading edge of developing, discussing, and conducting transdisciplinary research, as well

<sup>1</sup> [www.bosch-stiftung.de/postdocacademy](http://www.bosch-stiftung.de/postdocacademy)

<sup>2</sup> [www.td-academy.org](http://www.td-academy.org)

as experiencing its challenges. To support ECRs, the platform will provide new research insights as well as an overview of existing capacity-building opportunities in transdisciplinary research from leading international academic institutions. Thus, it will help further developing new for-

with other academic institutions that conduct, promote, and shape transdisciplinary research. Other academic institutions of this kind will be invited to be partners of the *tdAcademy* as part of a supporting group of experts and institutions that will also be involved in the project governance.

*We are excited to learn from the future experiences within the fellowship program, with more flexible formats that will involve researchers and actors across different career levels and with an even broader spectrum of backgrounds.*

mats based on the insights gained in the research and community building activities, for example, in organizing its own summer schools and workshops with a specific focus on the four aforementioned issues of the project. To enable these activities, the *tdAcademy* is funded for the next three years as part of the funding priority *Social-Ecological Research* of the Federal Ministry of Education and Research (BMBF).

Another important element of the platform is the complementary guest and fellowship program funded by the Robert Bosch Stiftung. In this program, researchers and particularly ECRs from the global south and global north have the opportunity to widen their network, exchange their research experiences, discuss the latest developments of transdisciplinary research, and present their research to the global community. Guests and fellows can either individually or collaboratively work on specific topics of transdisciplinary research, write publications or position papers, and develop innovative approaches and ideas. The first opportunities for individual research stays will already be announced in 2020 and the first fellowship groups shall start in spring/summer 2021.

Even though the *tdAcademy* is founded by Leuphana, ISOE, Oeko-Institut and ZTG it is not meant to be an exclusive project of these partners. Rather, they want to illustrate the importance of close collaborations

### Conclusion and Outlook

The experiences of the first cohorts of the *Postdoc Academy* as well as the insights of *TransImpact* – the precursor project of the Platform *tdAcademy* – clearly confirm the need and benefit for capacity building, empowerment and networking opportunities particularly for ECRs. Yet, the experiences also highlight that these formats and spaces need to be shaped in a fundamentally different way than “educational” offers on the graduate and partly post graduate level. Although capacity building and the complementing existing competences in the sense of continuous/lifelong learning play an important role, a genuine mutual learning process between all actors involved, community building and the provision of spaces for the exploration of interfaces and new ideas are a particularly important further enhancement. In this sense we are also excited to learn from the future experiences within the fellowship program, with more flexible formats that will involve researchers and actors across different career levels and with an even broader spectrum of backgrounds.

The two formats described are not meant to compete with established and successful formats such as the *TD Summer School* at Leuphana University of Lüneburg or the *TD Winter School* designed by the *TdLab* at ETH Zurich but wants to complement them. As mentioned, one task of the *td-*

*Academy* is to make these different formats and offers accessible in a structured way to a broad (research) community and create a space for exchanging experiences among the ones involved in realizing them.

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